

**RESPONSE TO OBR PROJECT ISSUES CHECKLIST  
LATEST DATE OF JULY 3, 2019,  
PROJECT NUMBER # PDS2016-TM-5615,  
PDS2016-MUP-16-012, PDS2016-MUP-16-013  
BY COUNTY OF SAN DIEGO**

**PREPARED FOR  
OCEAN BREEZE RANCH  
5820 WEST LILAC ROAD  
BONSALL, CALIFORNIA 92003**

**W.O. 6960-A7-SC     JULY 29, 2019**



**Geotechnical • Geologic • Coastal • Environmental**

5741 Palmer Way • Carlsbad, California 92010 • (760) 438-3155 • FAX (760) 931-0915 • [www.geosoilsinc.com](http://www.geosoilsinc.com)

July 29, 2019

W.O. 6960-A7-SC

**Ocean Breeze Ranch**  
5820 West Lilac Road  
Bonsall, California 92003

Attention: Mr. Jim Conrad

Subject: Response to OBR Project Issues Checklist, Latest Date of July 3, 2019, Project Number# PDS2016-TM-5615, PDS2016-MUP-16-012, PDS2016 - MUP-16-013, by County of San Diego.

- References:
1. "Project Name: Ocean Breeze Ranch, Project Number PDS2016-TM-5615, PDS2016-MUP-16-012, PDSD2016-MUP-16-013, Planning & Development Services (PDS) Planning and CEQA Comments," latest date of July 3, 2019, by County of San Diego
  2. "Addendum to the Percolation Feasibility Study, Planning Area 3 of Ocean Breeze Ranch, Including Residences R7 and R8, and Barn B9, Community of Bonsall, San Diego County, California," W.O. 6960-A6-SC, dated May 17, 2019, by Geosoils, Inc.
  3. "Percolation Feasibility Study, Planning Area 3 of Ocean Breeze Ranch, Including Residences R7 and R8, and Barn B9, Community of Bonsall, San Diego County, California," W.O. 6960-A6-SC, dated May 6, 2019, by Geosoils, Inc.

Dear Mr. Conrad:

In accordance with the request of Mr. Pete Fagrell, this summary report presents the responses to the subject checklist, prepared by the County of San Diego. The scope of our services has included a review of the referenced documents, performance of an additional drilling to satisfy County review comments, analysis of data, and preparation of this response narrative. For convenience, portions of the Checklist are reproduced below, *in italics*, followed by our response.

### **REVIEW RESPONSE**

#### **Review Comment No. 1-10.**

*DEH has reviewed the Percolation Feasibility Study and the subsequent Addendum to the Percolation Feasibility Study for the proposed Subdivision that were received by PDS on 4/24/19. The following items must be addressed before DEH can recommend approval of the project.*

Response to Comment No. 1-10.

Acknowledged.

Review Comment No. 1-11.

*The groundwater borings (GW1-GW11) completed as part of the percolation testing were drilled between 4/16/19 and 4/19/19. All these excavations were backfilled on the day that they were drilled, according to the boring logs provided. The excavations at GW3 and GW9 indicate that water seepage zones were encountered at 7'-8'. None of the excavations had piezometers installed for the purposes of groundwater monitoring. The Percolation Feasibility Study indicates that groundwater levels during March 2014 were encountered at 13.5' to 15.5' below existing grade along the northern edge of PA-3. Groundwater measurements at those levels, following a three-year period of below normal precipitation, are concerning. The rainfall totals (July1-June 30) for the Fallbrook station were shown to be 10.27" for 2011-2012, 8.35" for 2012-2013, and 6.99" for 2013-2014. All well below the 14.13" average reading. DEH requests that piezometers be installed to a depth of at least 20' at the lowest proposed elevations for the primary/reserve leach field areas at B9, R7, R8 and parcels 382, 394 and 395. The applicant should notify DEH once these have been installed so that measurements can be taken.*

Response to Comment No. 1-11.

Six (6) borings (see the Appendix) were advanced within Planning Area 3 of the site, in the vicinity of the proposed R7, R8, and B9 leach fields, as well as parcels 382, 394 and 395, and were extended to depths of ranging from about 14½ feet (refusal) to 22 feet below existing grade for the installation of piezometers, and DEH was notified. The groundwater data is summarized in the following table, and the locations of the borings are shown on re-revised Plates 1 and 2.

LOCATION/TOTAL DEPTH (FT)	B-1 @ B-9 Shop/ 19¾' TD	B-2 @R7/ 14½' TD	B-3 @ R8 22'TD	B-4 @ Lot 395 19¾' TD	B-5 @ Lot 394 20'TD	B-6 @ Lot 382 20'TD
APPROX. BORING ELEVATION (FT)	204.00	204.00	206.00	212.00	229.00	266.00
WATER DEPTH (FT) 7-18-19	14.75	12.00	13.00	12.50	-	-
WATER ELEVATION (FT) 7-18-19	189.25	192.00	193.00	199.50	-	-
WATER DEPTH (FT) 7-19-194	14.75	12.00	12.75	12.50	-	-
WATER ELEVATION (FT) 7-19-19	189.25	192.00	193.25	199.50	-	-

LOCATION/TOTAL DEPTH (FT)	B-1 @ B-9 Shop/ 19¾' TD	B-2 @R7/ 14½' TD	B-3 @ R8 22'TD	B-4 @ Lot 395 19¾' TD	B-5 @ Lot 394 20'TD	B-6 @ Lot 382 20'TD
FINAL WATER DEPTH (FT) 7-27-19	14.75	12.25	11.25	12.25	-	-
FINAL WATER ELEVATION (FT) 7-27-19	189.25	191.75	194.75	199.75	-	-
LOWEST PERCOLATION BOTTOM ELEVATION (FT)	200.00	200.00	202.00	208.00	225.00	262.00
NOTES	>5 FEET Separation	> 5 FEET Separation	>5 FEET Separation	>5 FEET Separation	No GW	No GW

Review Comment No. 1-12.

*The proposed leach field area shown for R8b is directly adjacent to the water line easement. Revise the leach field location to allow for the 25' setback from the water line or 10' from the easement, whichever is greater.*

Response No. 1-12.

Acknowledged. The revised location of the leach field is shown on re-revised Plate 2.

Review Comment No. 1-13.

*The Percolation Feasibility Study (page 8) suggests 200' of leach line for B9(Shop) in the table at the top of the page. A commercial criteria design for B9 that would require 20' of leach line is suggested in the table at the bottom of page 8. The percolation test report on Plate C-18 suggests 300' of leach line be applied for B9. DEH cannot support the commercial but can support the other two designs. Please clarify which design is to be used.*

Response No. 1-13.

Assuming that the structure will be a barn/shop with a bathroom and a sink, then 200 feet of leach line is satisfactory, from a geotechnical viewpoint.

Review Comment No. 1-14.

*The Percolation Feasibility Study (page 8) mentions 200% reserve area requirements which are no longer required since the adoption of the LAMP in 2015. All proposed leach field designs require 100% reserve area only. Minimum lot sizes are no longer applied for lots with percolation rates over 60MPI.*



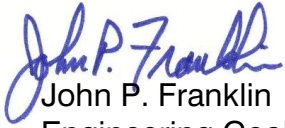
Response No. 1-14.

Acknowledged.

The opportunity to be of service is sincerely appreciated. If you should have any questions, please do not hesitate to contact our office.

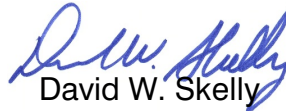
Respectfully submitted,

**GeoSoils, Inc.**

  
John P. Franklin

Engineering Geologist, CEG 1340



  
David W. Skelly

Civil Engineer, REC 47857



JPF/DWS/jh

Attachments: Appendix - Boring Logs

Re-Revised Plate 1 - Potential Leach Field Map PA-3

Re-Revised Plate 2 - Potential Leach Field Map Building Sites R7, R8, B9

Distribution: (1) Addressee (email)

(4) Helios Property Solutions LLC, Mr. Peter Fagrell (wet sign/stamp & email)

**APPENDIX**  
**BORING LOGS**

UNIFIED SOIL CLASSIFICATION SYSTEM					CONSISTENCY OR RELATIVE DENSITY																													
Major Divisions			Group Symbols	Typical Names	CRITERIA																													
Coarse-Grained Soils More than 50% retained on No. 200 sieve	Gravels 50% or more of coarse fraction retained on No. 4 sieve	Clean Gravels	GW	Well-graded gravels and gravel-sand mixtures, little or no fines	<div><u>Standard Penetration Test</u></div> <div><div>Penetration Resistance N (blows/ft)</div><div>Relative Density</div></div> <table><tr><td>0 - 4</td><td>Very loose</td></tr><tr><td>4 - 10</td><td>Loose</td></tr><tr><td>10 - 30</td><td>Medium</td></tr><tr><td>30 - 50</td><td>Dense</td></tr><tr><td>&gt; 50</td><td>Very dense</td></tr></table>			0 - 4	Very loose	4 - 10	Loose	10 - 30	Medium	30 - 50	Dense	> 50	Very dense																	
			0 - 4	Very loose																														
		4 - 10	Loose																															
		10 - 30	Medium																															
	30 - 50	Dense																																
	> 50	Very dense																																
	GP	Poorly graded gravels and gravel-sand mixtures, little or no fines																																
	Gravel with	GM	Silty gravels gravel-sand-silt mixtures																															
		GC	Clayey gravels, gravel-sand-clay mixtures																															
	Sands more than 50% of coarse fraction passes No. 4 sieve	Clean Sands	SW	Well-graded sands and gravelly sands, little or no fines																														
SP			Poorly graded sands and gravelly sands, little or no fines																															
Sands with Fines		SM	Silty sands, sand-silt mixtures																															
		SC	Clayey sands, sand-clay mixtures																															
		<div><u>Standard Penetration Test</u></div> <div><div>Penetration Resistance N (blows/ft)</div><div>Consistency</div><div>Unconfined Compressive Strength (tons/ft²)</div></div> <table><tr><td>&lt;2</td><td>Very Soft</td><td>&lt;0.25</td></tr><tr><td>2 - 4</td><td>Soft</td><td>0.25 - .050</td></tr><tr><td>4 - 8</td><td>Medium</td><td>0.50 - 1.00</td></tr><tr><td>8 - 15</td><td>Stiff</td><td>1.00 - 2.00</td></tr><tr><td>15 - 30</td><td>Very Stiff</td><td>2.00 - 4.00</td></tr><tr><td>&gt;30</td><td>Hard</td><td>&gt;4.00</td></tr></table>			<2	Very Soft	<0.25	2 - 4	Soft	0.25 - .050	4 - 8	Medium	0.50 - 1.00	8 - 15	Stiff	1.00 - 2.00	15 - 30	Very Stiff	2.00 - 4.00	>30	Hard	>4.00												
					<2	Very Soft	<0.25																											
2 - 4	Soft				0.25 - .050																													
4 - 8	Medium				0.50 - 1.00																													
8 - 15	Stiff				1.00 - 2.00																													
15 - 30	Very Stiff				2.00 - 4.00																													
>30	Hard				>4.00																													
Fine-Grained Soils 50% or more passes No. 200 sieve	Silts and Clays Liquid limit 50% or less				ML	Inorganic silts, very fine sands, rock flour, silty or clayey fine sands																												
					CL	Inorganic clays of low to medium plasticity, gravelly clays, sandy clays, silty clays, lean clays																												
					OL	Organic silts and organic silty clays of low plasticity																												
	Silts and Clays Liquid limit greater than 50%	MH	Inorganic silts, micaceous or diatomaceous fine sands or silts, elastic silts																															
		CH	Inorganic clays of high plasticity, fat clays																															
		OH	Organic clays of medium to high plasticity																															
Highly Organic Soils		PT	Peat, mucic, and other highly organic soils																															
<div>3"3/4"#4#10#40#200 U.S. Standard Sieve</div> <table><tr><th rowspan="2">Unified Soil Classification</th><th rowspan="2">Cobbles</th><th colspan="2">Gravel</th><th colspan="3">Sand</th><th rowspan="2">Silt or Clay</th></tr><tr><th>coarse</th><th>fine</th><th>coarse</th><th>medium</th><th>fine</th></tr></table>					Unified Soil Classification	Cobbles	Gravel		Sand			Silt or Clay	coarse	fine	coarse	medium	fine																	
Unified Soil Classification	Cobbles	Gravel		Sand			Silt or Clay																											
		coarse	fine	coarse	medium	fine																												
<div><div><u>MOISTURE CONDITIONS</u></div><div><table><tr><td>Dry</td><td>Absence of moisture; dusty, dry to the touch</td><td>trace</td><td>0 - 5 %</td><td>C</td><td>Core Sample</td></tr><tr><td>Slightly Moist</td><td>Below optimum moisture content for compaction</td><td>few</td><td>5 - 10 %</td><td>S</td><td>SPT Sample</td></tr><tr><td>Moist</td><td>Near optimum moisture content</td><td>little</td><td>10 - 25 %</td><td>B</td><td>Bulk Sample</td></tr><tr><td>Very Moist</td><td>Above optimum moisture content</td><td>some</td><td>25 - 45 %</td><td>—</td><td>Groundwater</td></tr><tr><td>Wet</td><td>Visible free water; below water table</td><td></td><td></td><td>Qp</td><td>Pocket Penetrometer</td></tr></table></div><div><u>MATERIAL QUANTITY</u></div><div><u>OTHER SYMBOLS</u></div></div>					Dry	Absence of moisture; dusty, dry to the touch	trace	0 - 5 %	C	Core Sample	Slightly Moist	Below optimum moisture content for compaction	few	5 - 10 %	S	SPT Sample	Moist	Near optimum moisture content	little	10 - 25 %	B	Bulk Sample	Very Moist	Above optimum moisture content	some	25 - 45 %	—	Groundwater	Wet	Visible free water; below water table			Qp	Pocket Penetrometer
Dry	Absence of moisture; dusty, dry to the touch	trace	0 - 5 %	C	Core Sample																													
Slightly Moist	Below optimum moisture content for compaction	few	5 - 10 %	S	SPT Sample																													
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Very Moist	Above optimum moisture content	some	25 - 45 %	—	Groundwater																													
Wet	Visible free water; below water table			Qp	Pocket Penetrometer																													
<b>BASIC LOG FORMAT:</b> Group name, Group symbol, (grain size), color, moisture, consistency or relative density. Additional comments: odor, presence of roots, mica, gypsum, coarse grained particles, etc.																																		
<b>EXAMPLE:</b> Sand (SP), fine to medium grained, brown, moist, loose, trace silt, little fine gravel, few cobbles up to 4" in size, some hair roots and rootlets.																																		

# GeoSoils, Inc.

# BORING LOG

PROJECT: OCEAN BREEZE RANCH  
5820 W. Lilac Road

W.O. 6960-A7-SC BORING B-1 SHEET 1 OF 1

DATE EXCAVATED 7/18/19 LOGGED BY: MJS APPROX. ELEV.: 204' MSL

SAMPLE METHOD: Truck Mounted Rig, 6-8" Auger

Depth (ft.)	Sample			USCS Symbol	Dry Unit Wt. (pcf)	Moisture (%)	Saturation (%)	Material Description
	Bulk	Undisturbed	Blows/Ft.					
0				SM				<b>QUATERNARY ALLUVIUM:</b> @ 0' SILTY SAND, light olive brown, dry, loose.  @ 4' As per 0', damp.  @ 6' SAND, slight yellowish brown, damp, loose to medium dense; fine to medium grained, scattered subangular pebbles, micaceous.  @ 10' As per 6', dark yellowish brown, moist to wet.  @ 15' Groundwater encountered. @ 16' SAND, interbedded dark yellowish brown and dark gray brown, saturated, loose; fine to coarse grained, scattered subrounded pebbles, micaceous.
5				SP				
10								
15								
20								
25								Total Depth = 19 <sup>3</sup> / <sub>4</sub> ' Groundwater @ 15' (@16' 7/18/19) Backfilled 7/27/19
30								

☒ Standard Penetration Test  
☐ Undisturbed, Ring Sample

☒ Groundwater  
☐ Seepage

GeoSoils, Inc.

PLATE A-2

# GeoSoils, Inc.

# BORING LOG

PROJECT: OCEAN BREEZE RANCH  
5820 W. Lilac Road

W.O. 6960-A7-SC BORING B-2 SHEET 1 OF 1

DATE EXCAVATED 7/18/19 LOGGED BY: MJS APPROX. ELEV.: 204' MSL

SAMPLE METHOD: Truck Mounted Rig, 6-8" Auger

Depth (ft.)	Sample			USCS Symbol	Dry Unit Wt. (pcf)	Moisture (%)	Saturation (%)	Material Description
	Bulk	Undisturbed	Blows/Ft.					
0				ML				<b>OLDER ALLUVIUM:</b> @ 0' SANDY SILT, medium brown, dry to damp, medium dense.
5				SM				@ 5' As per 0', dark reddish brown.
10				SM				@ 7' SILTY SAND, dark yellowish brown, slightly moist to moist, dense; scattered subangular pebbles.
15				SM				<b>WEATHERED GRANITICS:</b> @ 12' SILTY SAND, light yellowish brown, slightly moist to moist, very dense. @ 14' As per 12', yellowish brown, wet. @ 14' Potential perched water encountered.
20								Practical Refusal @ 14½' Potential Perched Water Encountered @ 14' Backfilled 7/27/19
25								
30								

☒ Standard Penetration Test  
☐ Undisturbed, Ring Sample

☒ Groundwater  
☐ Seepage

GeoSoils, Inc.

PLATE A-3

# GeoSoils, Inc.

# BORING LOG

PROJECT: OCEAN BREEZE RANCH  
5820 W. Lilac Road

W.O. 6960-A7-SC BORING B-3 SHEET 1 OF 1

DATE EXCAVATED 7/18/19 LOGGED BY: MJS APPROX. ELEV.: 206' MSL

SAMPLE METHOD: Truck Mounted Rig, 6-8" Auger

Depth (ft.)	Sample			USCS Symbol	Dry Unit Wt. (pcf)	Moisture (%)	Saturation (%)	Material Description
	Bulk	Undisturbed	Blows/Ft.					
0				SM				<b>COLLUVIUM:</b> @ 0' SILTY SAND, light brown, dry, loose.
5				SM SP				<b>OLDER ALLUVIUM:</b> @ 2½' SILTY SAND, yellowish brown, damp, loose; sporadic granitic pebbles. @ 5' SAND, dark gray brown, damp to moist, loose; fine grained.
10				CL				@ 9' SILTY CLAY, dark gray brown, moist, soft to medium stiff.
15								@ 12½' SANDY CLAY, dark olive brown, moist to wet, stiff; granitic sand. @ 14' GRAVELLEY CLAY, gray brown, moist, dense/hard; subrounded gravels. @ 15' As per 14', dark reddish brown and dark gray brown.
20								@ 17' SANDY CLAY, dark yellowish brown to olive brown, moist to wet, very stiff to hard.
25								Total Depth = 22' No Groundwater Encountered Backfilled 7/27/19
30								

☒ Standard Penetration Test  
☐ Undisturbed, Ring Sample

☐ Groundwater  
☐ Seepage

GeoSoils, Inc.

PLATE A-4

# GeoSoils, Inc.

# BORING LOG

PROJECT: OCEAN BREEZE RANCH  
5820 W. Lilac Road

W.O. 6960-A7-SC BORING B-4 SHEET 1 OF 1

DATE EXCAVATED 7/18/19 LOGGED BY: MJS APPROX. ELEV.: 212' MSL

SAMPLE METHOD: Truck Mounted Rig, 6-8" Auger

Depth (ft.)	Sample			USCS Symbol	Dry Unit Wt. (pcf)	Moisture (%)	Saturation (%)	Material Description
	Bulk	Undisturbed	Blows/Ft.					
0				SM				<b>OLDER ALLUVIUM:</b> @ 0' SILTY SAND, light brown, dry, loose. @ 1½' SILTY SAND, brown, damp, loose.  @ 3½' SILTY SAND, brown, moist, loose to medium dense.
5								
10				SC/CL				@ 7½' CLAYEY SAND/SANDY CLAY, olive brown, wet, medium dense to dense.
15				CL				@ 12½' SANDY CLAY, olive brown, wet, medium stiff to stiff. @ 12½' Groundwater encountered.
20								@ 16½' SANDY CLAY, yellowish brown, saturated, stiff traces of granules.
25								Total Depth = 19¾' Groundwater Encountered @ 12½' Backfilled 7-27-2019
30								

☒ Standard Penetration Test  
☐ Undisturbed, Ring Sample

☒ Groundwater  
☐ Seepage

GeoSoils, Inc.

PLATE A-5

# GeoSoils, Inc.

# BORING LOG

PROJECT: OCEAN BREEZE RANCH  
5820 W. Lilac Road

W.O. 6960-A7-SC BORING B-5 SHEET 1 OF 1

DATE EXCAVATED 7/18/19 LOGGED BY: MJS APPROX. ELEV.: 229' MSL

SAMPLE METHOD: Truck Mounted Rig, 6-8" Auger

Depth (ft.)	Sample			USCS Symbol	Dry Unit Wt. (pcf)	Moisture (%)	Saturation (%)	Material Description
	Bulk	Undisturbed	Blows/Ft.					
0				SC				<b>OLDER ALLUVIUM:</b> @ 0' CLAYEY SAND, reddish brown, dry, loose.
5				SC/ SM				@ 2½' CLAYEY SAND/SILTY SAND, brown, moist, loose to medium dense.
10				SC				@ 6½' CLAYEY SAND, brown, moist, medium dense to dense.
15								@ 12' CLAYEY SAND, brown, moist, dense.
20				SC/CL				@ 18' CLAYEY SAND/SANDY CLAY, olive brown, moist, dense/stiff.
25								Total Depth = 20' No Groundwater Encountered Backfilled 7-20-2019
30								

☒ Standard Penetration Test  
☐ Undisturbed, Ring Sample

☐ Groundwater  
☐ Seepage

GeoSoils, Inc.

PLATE A-6



# GeoSoils, Inc.

# BORING LOG

PROJECT: OCEAN BREEZE RANCH  
5820 W. Lilac Road

W.O. 6960-A7-SC BORING B-6 SHEET 1 OF 1

DATE EXCAVATED 7/18/19 LOGGED BY: MJS APPROX. ELEV.: 266' MSL

SAMPLE METHOD: Truck Mounted Rig, 6-8" Auger

Depth (ft.)	Sample			USCS Symbol	Dry Unit Wt. (pcf)	Moisture (%)	Saturation (%)	Material Description
	Bulk	Undisturbed	Blows/Ft.					
0				SM				<b>WEATHERED GRANITICS:</b> @ 0' SILTY SAND, light brown, dry, loose.
5								@ 4' SILTY SAND, dark brown, moist, loose.
10				CL				@ 7' SANDY CLAY, dark brown, moist, medium stiff.
15				SC				@ 12' CLAYEY SAND, grayish brown, damp, dense.
20				SM				@ 15' SILTY SAND, gray, damp, dense.
25								Total Depth = 20' No Groundwater Encountered Backfilled 7-27-2019
30								

☒ Standard Penetration Test  
☐ Undisturbed, Ring Sample

☒ Groundwater  
☐ Seepage

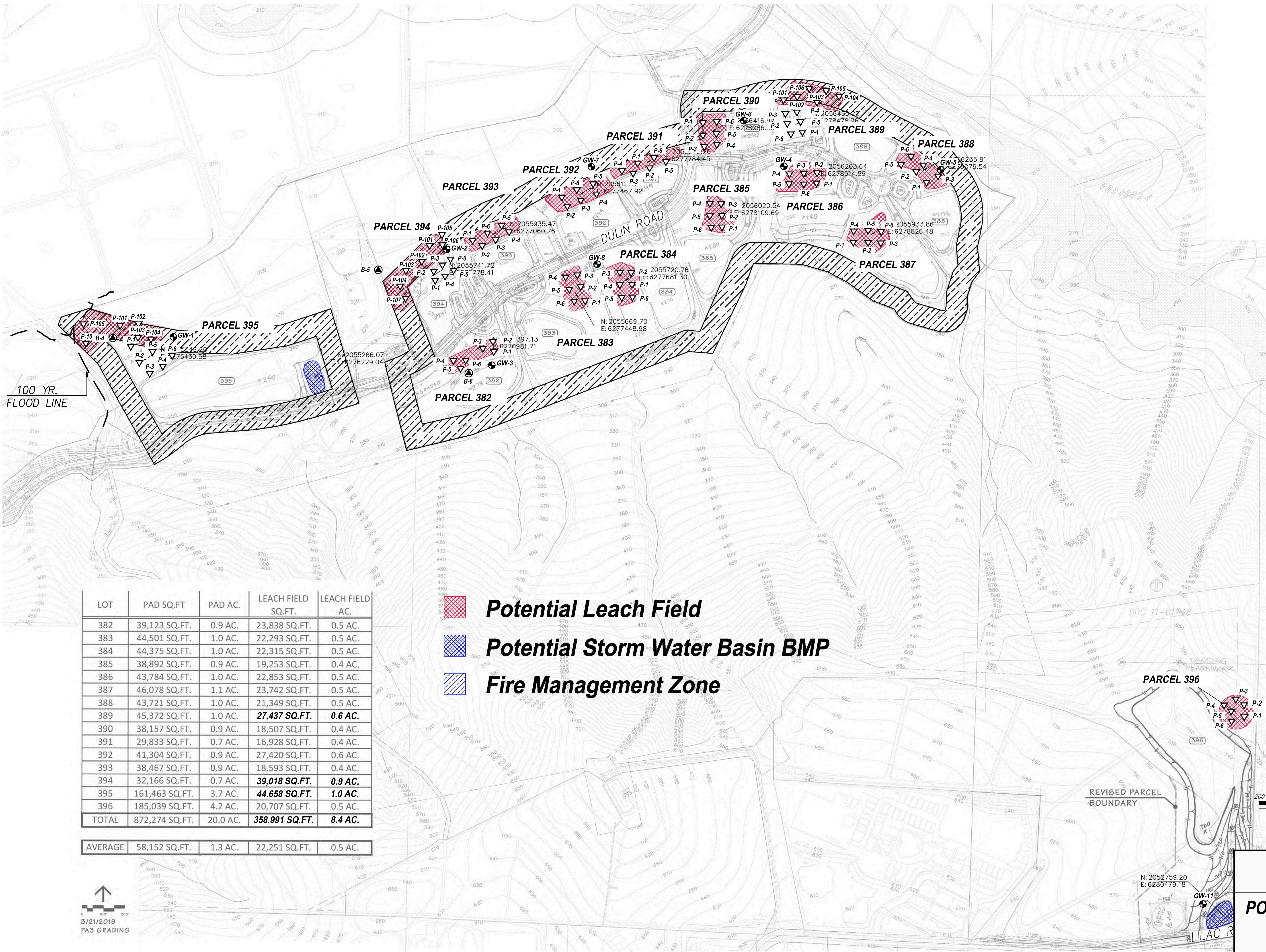
GeoSoils, Inc.

PLATE A-7



GSi LEGEND

- P-6 — APPROXIMATE LOCATION OF PERCOLATION TEST IN A GIVEN PARCEL AREA (GSI, 2019)
- P-106 — APPROXIMATE LOCATION OF PERCOLATION TEST IN A GIVEN PARCEL AREA (THIS STUDY)
- GW-11 — APPROXIMATE LOCATION OF GROUNDWATER TEST BORING IN A GIVEN PARCEL AREA
- B-6 — APPROXIMATE LOCATION OF GROUNDWATER TEST BORING



ALL LOCATIONS ARE APPROXIMATE  
This document or effile is not a part of the Construction Documents and should not be relied upon as being an accurate depiction of design.

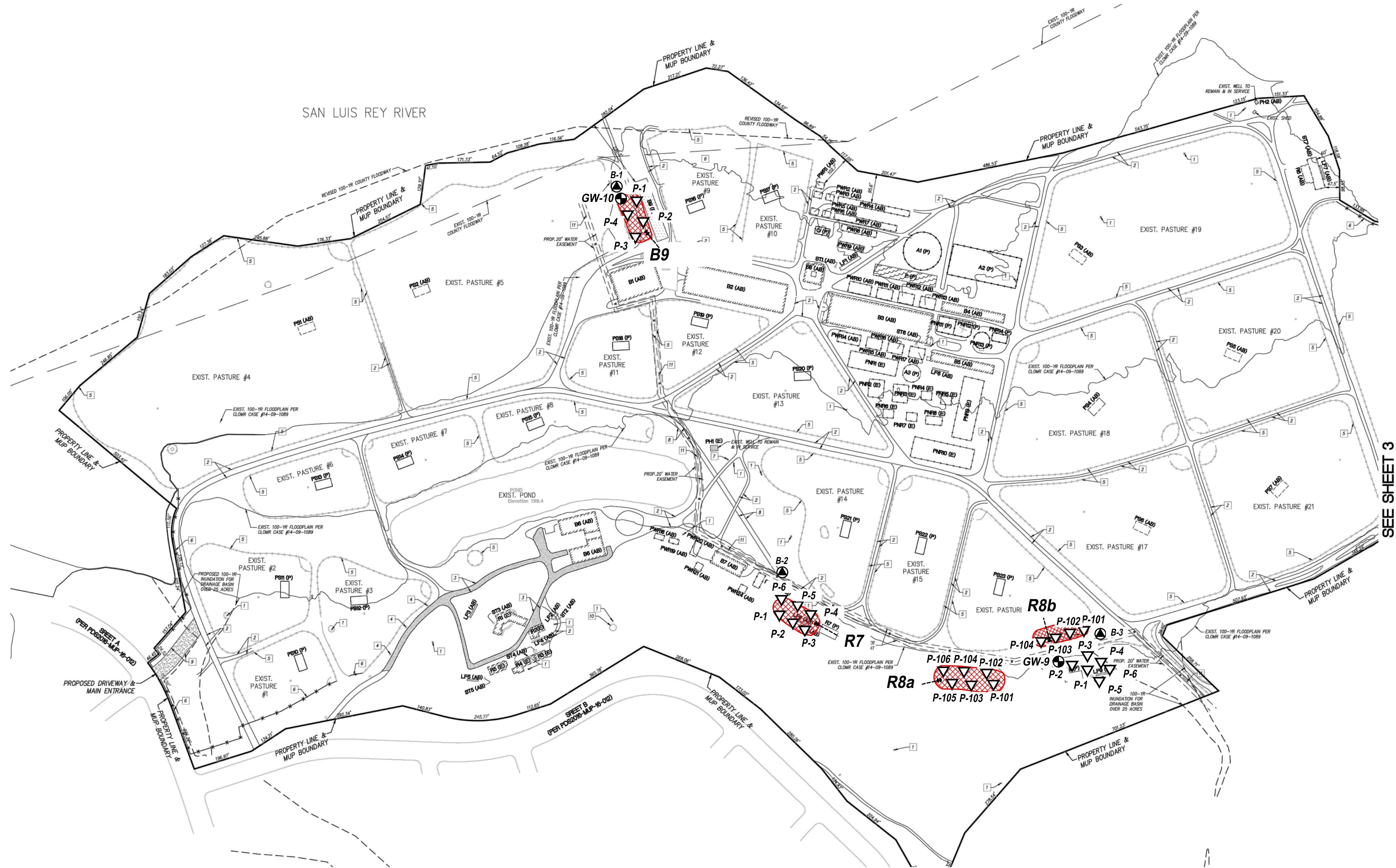


POTENTIAL LEACH FIELD MAP

PA-3  
Re-Revised Plate 1

W.O. 6960-A6-SC DATE: 07/19 SCALE: 1" = 200'





SEE SHEET 3

## GSI LEGEND

- P-6** — APPROXIMATE LOCATION OF PERCOLATION TEST IN A GIVEN PARCEL AREA (GSI, 2019)
- P-106** — APPROXIMATE LOCATION OF PERCOLATION TEST IN A GIVEN PARCEL AREA (THIS STUDY)
- GW-11** — APPROXIMATE LOCATION OF GROUNDWATER TEST BORING IN A GIVEN PARCEL AREA
- B-6** — APPROXIMATE LOCATION OF GROUNDWATER TEST BORING
- R7** — APPROXIMATE LOCATION OF MOBILE HOME RESIDENTIAL, POTENTIAL LEACH FIELD AREA
- R8** — APPROXIMATE LOCATION OF MOBILE HOME RESIDENTIAL, POTENTIAL LEACH FIELD AREA
- B9** — APPROXIMATE LOCATION OF BARN/ SHOP LEACH FIELD AREA

## BUILDING LEGEND:

- |           |                          |            |                        |
|-----------|--------------------------|------------|------------------------|
| <b>A</b>  | ARENA OR EXERCISER       | <b>FWR</b> | FOWLING PENS WITH ROOF |
| <b>B1</b> | SHOP/ EQUIPMENT STORAGE  | <b>LF</b>  | LEACH FIELD            |
| <b>B2</b> | MARE BARN                | <b>M</b>   | MOBILE HOME            |
| <b>B4</b> | LAY UP BARN REHAB        | <b>P</b>   | THERAPY POOL           |
| <b>B4</b> | TRAINING BARN            | <b>PH</b>  | PUMP HOUSE             |
| <b>B5</b> | TRAINING BARN            | <b>PNR</b> | PENS NO ROOF           |
| <b>B6</b> | STALLION BARN            | <b>PS</b>  | PASTURE SHED           |
| <b>B7</b> | FOWLING BARN             | <b>PWR</b> | PENS WITH ROOF         |
| <b>B8</b> | BREEDING BARN            | <b>Q</b>   | QUARANTINE PEN         |
| <b>B9</b> | SHOP                     | <b>R</b>   | RESIDENCE BUILDING     |
| <b>EH</b> | RELOCATED EMPLOYEE HOUSE | <b>ST</b>  | SEPTIC TANK            |

## BUILDING STATUS LEGEND:

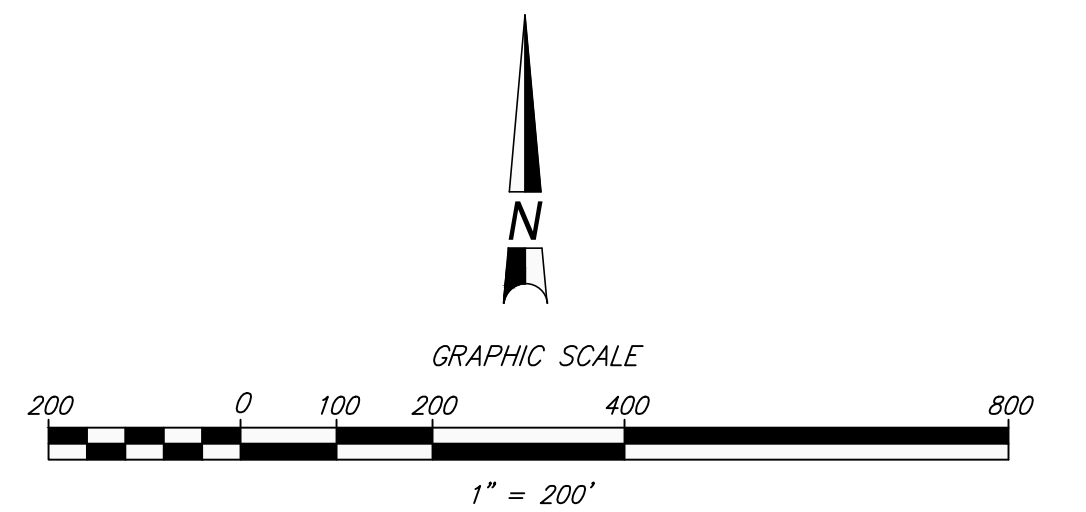
- |             |          |   |
|-------------|----------|---|
| <b>(AB)</b> | AS-BUILT | RECENTLY BUILT WITHOUT PRIOR PERMIT                       |
| <b>(E)</b>  | EXISTING | EXISTING BUILDINGS/STRUCTURES WITH PERMIT                 |
| <b>(P)</b>  | PROPOSED | PROPOSED NEW BUILDINGS/STRUCTURES REQUIRE BUILDING PERMIT |

## LEGEND:

- |          |                       |           |                               |
|----------|-----------------------|-----------|-------------------------------|
| <b>1</b> | POWER POLE (EXIST.)   | <b>7</b>  | ELECTRIC TRANSFORMER (EXIST.) |
| <b>2</b> | DIRT ROAD (EXIST.)    | <b>8</b>  | DIRT ROAD (PROPOSED)          |
| <b>3</b> | ASPHALT ROAD (EXIST.) | <b>9</b>  | ASPHALT ROAD (PROPOSED)       |
| <b>4</b> | LIGHT (EXIST.)        | <b>10</b> | TANK (EXIST.)                 |
| <b>5</b> | WOOD FENCE (EXIST.)   | <b>11</b> | WATER LINE (EXIST.)           |
| <b>6</b> | WOOD FENCE (PROPOSED) |           |                               |

BASE MAP FROM:

MAJOR USE PERMIT 5615 EQUESTRIAN CENTER	
OCEAN BREEZE RANCH	
	PROJECT DESIGN CONSULTANTS Planning   Landscape Architecture   Engineering   Survey
SHEET 2 OF 8	



ALL LOCATIONS ARE APPROXIMATE

This document or effile is not a part of the Construction Documents and should not be relied upon as being an accurate depiction of design.



## POTENTIAL LEACH FIELD MAP BUILDING SITES R7, R8, B9

Re-Revised Plate 2

W.O. 6960-A6-SC DATE: 07/19 SCALE: 1" = 200'



**ADDENDUM TO THE PERCOLATION FEASIBILITY STUDY  
PLANNING AREA 3 OF OCEAN BREEZE RANCH  
INCLUDING RESIDENCES R7 AND R8, AND BARN B9  
COMMUNITY OF BONSALL  
SAN DIEGO COUNTY, CALIFORNIA**

**GeoSoils, Inc.**

**FOR**

**OCEAN BREEZE RANCH  
5820 WEST LILAC ROAD  
BONSALL, CALIFORNIA 92003**

**W.O. 6960-A6-SC    MAY 17, 2019**



**Geotechnical • Geologic • Coastal • Environmental**

5741 Palmer Way • Carlsbad, California 92010 • (760) 438-3155 • FAX (760) 931-0915 • [www.geosoilsinc.com](http://www.geosoilsinc.com)

May 17, 2019

W.O. 6960-A6-SC

**Ocean Breeze Ranch**

5820 West Lilac Road  
Bonsall, California 92003

Attention: Mr. Jim Conrad

Subject: Addendum to the Percolation Feasibility Study, Planning Area 3 of Ocean Breeze Ranch, Including Residences R7 and R8, and Barn B9, Community of Bonsall, San Diego County, California

Reference: "Percolation Feasibility Study, Planning Area 3 of Ocean Breeze Ranch, Including Residences R7 and R8, and Barn B9, Community of Bonsall, San Diego County, California," W.O. 6960-A6-SC, dated May 6, 2019, by Geosoils, Inc.

Dear Mr. Conrad:

In accordance with your request and authorization, GeoSoils, Inc. (GSI) has prepared the following addendum to the referenced percolation feasibility study, with respect to onsite wastewater treatment within certain sites in Planning Area PA-3, and select sites within the existing equestrian center property, at Ocean Breeze Ranch, in the community of Bonsall, San Diego County, California. The purpose of this addendum was to perform additional percolation testing with respect to a re-evaluation of potential leach fields within Parcels 389, 394, 395, and residential site R8, where previous testing evaluated percolation rates that exceeded a minimum rate threshold of 120 minutes/inch (see Reference). Unless specifically superseded herein, the conclusions and recommendations presented in the referenced report remain valid and applicable. This addendum presents the findings of our additional testing, and related parcel specific design for the affected parcels/sites only. Please refer to the referenced report for a discussion of site conditions, regional groundwater conditions, means and methods, other references, etc.

**SCOPE OF SERVICES**

The scope of our services has included the following:

1. A review of referenced report.

2. A review of the “potential leach field and storm water basin BMP” exhibit, for building Parcel Nos. 382 through 396 (see revised Plate 1).
3. Review of the “potential leach field sites in the vicinity of residential units (trailers) (R7 and R8), and barn/shop structure (B9), located within the equestrian center complex (see revised Plate 2).
4. Excavation of four (4) to six (6) percolation test borings for each potential leach field within Parcels 389, 394, and 395, and two potential leach fields (R8b and R8c) for Residential Site R8 (see revised Plates 1 and 2).
5. Evaluation of percolation rates (see Percolation Test Reports in the Appendix), based on current onsite testing, as it relates to the currently proposed construction.
6. Technical illustration of the locations of field percolation testing and proposed location of other proposed/existing improvements (see revised Plates 1 and 2).

### **Onsite Wastewater Treatment (Leach Field) System Design**

As per the requirements of the controlling authorities, all onsite wastewater disposal systems should be located within native onsite soil materials.

Final approval of the OWTS design provided herein will be based on review by the SDCDEH. The following table, and “percolation test reports” (see the Appendix) present the percolation rates obtained during our investigation, and general design criteria.

PARCEL/BUILDING NUMBER	PERCOLATION RATE (t) IN MINUTES/INCH	NUMBER OF BEDROOMS	SEPTIC TANK SIZE (Gal.)	TOTAL LENGTH OF LEACH LINE (FT.)
389	51	5-6	1,500	675
394	51	5-6	1,500	675
395	103	5-6	1,500	1200
R8b	95	2-3	1,000	920
R8c	29	2-3	1,000	420

In addition to the above area, a 100 to 200 percent expansion area in case of primary system failure, will need to be included in design considerations. Any changes to the location of the proposed OWTS, the estimated size of the septic tank, or building use, should be reviewed by this office. Depending upon the nature of any changes, and the requirements of the reviewing entity, additional percolation testing may be warranted.

## **PLAN REVIEW**

Once site development plans are available, these plans should be provided to this office for review and comment from an OWTS standpoint. Any proposed changes/additions to the bathroom configurations and/or locations should be made so that the proposed OWTS area is in accordance with this report. In addition, based on changes to the plans, if proposed, and/or final review by the County, additional percolation studies and/or field exploration may be necessary.

## **INVESTIGATION LIMITATIONS**

The materials encountered on the project site and utilized for our analysis are believed representative of the area; however, soil and bedrock materials vary in character between excavations and natural outcrops or conditions exposed during field testing and/or mass grading. Site conditions may vary due to seasonal changes or other factors.

Inasmuch as our study is based upon our review and engineering analyses and laboratory data, the conclusions and recommendations are professional opinions. These opinions have been derived in accordance with current standards of practice, and no warranty is express or implied. Standards of practice are subject to change with time. GSI assumes no responsibility or liability for work or testing performed by others, or their inaction; or work performed when GSI is not requested to be onsite, to evaluate if our recommendations have been properly implemented. Use of this report constitutes an agreement and consent by the user to all the limitations outlined above, notwithstanding any other agreements that may be in place. In addition, this report may be subject to review by the controlling authorities.

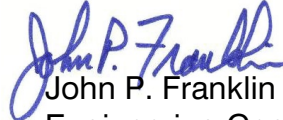
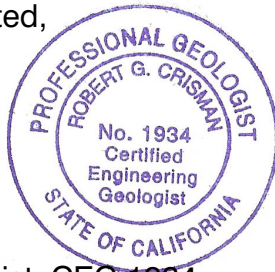
The opportunity to be of service is sincerely appreciated. If you should have any questions, please do not hesitate to contact our office.

Respectfully submitted,

**GeoSoils, Inc.**



Robert G. Crisman  
Engineering Geologist, CEG 1934



John P. Franklin  
Engineering Geologist, CEG 1340



MJS/RGC/JPF/jh

Attachments: Appendix - Percolation Test Reports, Parcel 389, 393, 394, and R8  
Revised Plate 1 - Potential Leach Field Map PA-3  
Revised Plate 2 - Potential Leach Field Map Building Sites R7, R8, B9

Distribution: (4) Addressee



**APPENDIX A**  
**PERCOLATION TEST REPORTS**



**COUNTY OF SAN DIEGO**  
**DEPARTMENT OF ENVIRONMENTAL HEALTH**  
**PERCOLATION TEST REPORT**

DEH Control #: \_\_\_\_\_  
Date: \_\_\_\_\_  
Activity Code: \_\_\_\_\_

Assessor's Parcel Number: 1241503500 Map # \_\_\_\_\_ Lot # 1286  
Site Address 5820 W. Lilac Road Town: Bonsall Zip Code: 92003  
Owner: Ocean Breeze Farms, LLC Phone: \_\_\_\_\_  
Mailing Address: 5820 W. Lilac Road, Bonsall, Ca.

Test Hole #	Test Depth	Stabilized Rate	Test Hole #	Test Depth	Stabilized Rate	Average Perc Rate
P101	55-67"	97	P105	46-58"	58	95
P102	48-60"	88	P106	58-60	21	
P103	47-59"	102				
P104	46-58"	203				

*Vertical seepage pits: Provide soils log, uniformity/capacity test results, and calculations on separate 8-1/2" x 11" sheets of paper*

TYPE OF SOIL: (clay, silt, sand, decomposed granite, etc.)

Surface: SILTY SAND (SM)  
2-5 ft. below surface: CLAYEY SAND (SC)  
\_\_\_\_\_ ft. below surface: \_\_\_\_\_  
\_\_\_\_\_ ft. below surface: \_\_\_\_\_  
\_\_\_\_\_ ft. below surface: \_\_\_\_\_

Depth to Refusal: NONE Depth to Groundwater: > 15'

**RECOMMENDATIONS:**

Septic Tank: 1000 gal Pump Chamber: \_\_\_\_\_ gal Surge Tank: \_\_\_\_\_ gal

Leach Line Length: 920 ft Seepage Pit Type: \_\_\_\_\_ Number of Pits: \_\_\_\_\_

Trench Depth: 4 ft Length: \_\_\_\_\_ ft Width: \_\_\_\_\_ ft

Rock below Pipe: 12" in Total Depth: \_\_\_\_\_ ft Cap Depth: \_\_\_\_\_ ft

Other: \_\_\_\_\_

Proposed Structure: 2-3 BEDROOM RESIDENTIAL

**WATER SUPPLY:**

Source of Potable Water: \_\_\_\_\_ Well Permit Number: \_\_\_\_\_

*I have reviewed this percolation data and design of the subsurface sewage disposal system for this parcel and find the data and design to be accurate and in compliance with state and local regulations, and good engineering practice.*

Registered CE, PE Geologist, REHS: John P. Frank CEG 1340

GeoSoils, Inc. Address: 5741 Palmen Way Phone: 760-438-3155 Date: 5-16-19

Carlsbad, Ca. 92010

FOR DEPARTMENT USE ONLY

Approved: Yes \_\_\_\_\_ No \_\_\_\_\_ Date: \_\_\_\_\_ Final Map Required: Yes \_\_\_\_\_ No \_\_\_\_\_

Specialist: \_\_\_\_\_ Date: \_\_\_\_\_

Building Plan Review: \_\_\_\_\_ Date: \_\_\_\_\_

Grading Inspection: \_\_\_\_\_ Date: \_\_\_\_\_

Water Sample Analysis Results: \_\_\_\_\_ Date: \_\_\_\_\_



**COUNTY OF SAN DIEGO**  
**DEPARTMENT OF ENVIRONMENTAL HEALTH**  
**PERCOLATION TEST REPORT**

DEH Control #: \_\_\_\_\_  
Date: \_\_\_\_\_  
Activity Code: \_\_\_\_\_

Assessor's Parcel Number: 1241503500 Map # \_\_\_\_\_ Lot # R8C  
Site Address 5820 W. Lilac Road Town: Bonsall Zip Code: 92003  
Owner: Ocean Breeze Farms, LLC Phone: \_\_\_\_\_  
Mailing Address: 5820 W. Lilac Road, Bonsall

Test Hole #	Test Depth	Stabilized Rate	Test Hole #	Test Depth	Stabilized Rate	Average Perc Rate
P101	36-48"	26				29
P102	36-48"	16				
P103	36-48"	33				
P104	36-48"	39				

*Vertical seepage pits: Provide soils log, uniformity/capacity test results, and calculations on separate 8-1/2" x 11" sheets of paper*

TYPE OF SOIL: (clay, silt, sand, decomposed granite, etc.)

Surface: SILTY SAND (SM)  
0-4 ft. below surface: SILTY SAND (SM)  
\_\_\_\_\_ ft. below surface: \_\_\_\_\_  
\_\_\_\_\_ ft. below surface: \_\_\_\_\_  
\_\_\_\_\_ ft. below surface: \_\_\_\_\_

Depth to Refusal: NONE Depth to Groundwater: > 15'

**RECOMMENDATIONS:**

Septic Tank: 1000 gal Pump Chamber: \_\_\_\_\_ gal Surge Tank: \_\_\_\_\_ gal  
Leach Line Length: 420 ft Seepage Pit Type: \_\_\_\_\_ Number of Pits: \_\_\_\_\_  
Trench Depth: 4 ft Length: \_\_\_\_\_ ft Width: \_\_\_\_\_ ft  
Rock below Pipe: 12 in Total Depth: \_\_\_\_\_ ft Cap Depth: \_\_\_\_\_ ft  
Other: \_\_\_\_\_  
Proposed Structure: 2-3 BEDROOM RESIDENTIAL

**WATER SUPPLY:**

Source of Potable Water: \_\_\_\_\_ Well Permit Number: \_\_\_\_\_

*I have reviewed this percolation data and design of the subsurface sewage disposal system for this parcel and find the data and design to be accurate and in compliance with state and local regulations, and good engineering practice.*

Registered CE, PE, Geologist, REHS: John P. Frank CEG 1340

Address: GeoSoils, Inc. 5741 Palmen Ln Phone: 760-438-3155 Date: 5-16-19  
Carlsbad, Ca. 92010

FOR DEPARTMENT USE ONLY

Approved: Yes \_\_\_\_ No \_\_\_\_ Date: \_\_\_\_\_ Final Map Required: Yes \_\_\_\_ No \_\_\_\_  
Specialist: \_\_\_\_\_ Date: \_\_\_\_\_  
Building Plan Review: \_\_\_\_\_ Date: \_\_\_\_\_  
Grading Inspection: \_\_\_\_\_ Date: \_\_\_\_\_  
Water Sample Analysis Results: \_\_\_\_\_ Date: \_\_\_\_\_





**COUNTY OF SAN DIEGO**  
**DEPARTMENT OF ENVIRONMENTAL HEALTH**  
**PERCOLATION TEST REPORT**

DEH Control #: \_\_\_\_\_  
Date: \_\_\_\_\_  
Activity Code: \_\_\_\_\_

Assessor's Parcel Number: 1241503500 Map # \_\_\_\_\_ Lot # 389  
Site Address 5820 W. LILAC ROAD Town: Bonsall Zip Code: 92003  
Owner: Ocean Breeze Farms, LLC Phone: \_\_\_\_\_  
Mailing Address: 5820 W. LILAC ROAD, Bonsall

Test Hole #	Test Depth	Stabilized Rate	Test Hole #	Test Depth	Stabilized Rate	Average Perc Rate
P101	46-58"	57	P105	47-59"	78	51
P102	48-60"	18	P106	50-64"	80	
P103	50-62"	24				
P104	50-62"	48				

*Vertical seepage pits: Provide soils log, uniformity/capacity test results, and calculations on separate 8-1/2" x 11" sheets of paper*

TYPE OF SOIL: (clay, silt, sand, decomposed granite, etc.)

Surface: SILTY SAND (SM)  
1.5 ft. below surface: CLAYED SAND (SC)  
\_\_\_\_\_ ft. below surface: \_\_\_\_\_  
\_\_\_\_\_ ft. below surface: \_\_\_\_\_  
\_\_\_\_\_ ft. below surface: \_\_\_\_\_

Depth to Refusal: NONE Depth to Groundwater: >15'

**RECOMMENDATIONS:**

Septic Tank: 1500 gal Pump Chamber: \_\_\_\_\_ gal Surge Tank: \_\_\_\_\_ gal  
Leach Line Length: 675 ft Seepage Pit Type: \_\_\_\_\_ Number of Pits: \_\_\_\_\_  
Trench Depth: 5 ft Length: \_\_\_\_\_ ft Width: \_\_\_\_\_ ft  
Rock below Pipe: 12 in Total Depth: \_\_\_\_\_ ft Cap Depth: \_\_\_\_\_ ft  
Other: \_\_\_\_\_  
Proposed Structure: 5-6 BEDROOM RESIDENTIAL

**WATER SUPPLY:**

Source of Potable Water: \_\_\_\_\_ Well Permit Number: \_\_\_\_\_

*I have reviewed this percolation data and design of the subsurface sewage disposal system for this parcel and find the data and design to be accurate and in compliance with state and local regulations, and good engineering practice.*

Registered CE, PE Geologist, REHS: John P. Frank CEG 1340  
GeoSoils, Inc.  
Address: 5741 PALMER WAY Phone: 760-438-3155 Date: 5-16-19  
CARLSBAD, CA 92010

**FOR DEPARTMENT USE ONLY**

Approved: Yes \_\_\_\_ No \_\_\_\_ Date: \_\_\_\_\_ Final Map Required: Yes \_\_\_\_ No \_\_\_\_  
Specialist: \_\_\_\_\_ Date: \_\_\_\_\_  
Building Plan Review: \_\_\_\_\_ Date: \_\_\_\_\_  
Grading Inspection: \_\_\_\_\_ Date: \_\_\_\_\_  
Water Sample Analysis Results: \_\_\_\_\_ Date: \_\_\_\_\_



**COUNTY OF SAN DIEGO**  
**DEPARTMENT OF ENVIRONMENTAL HEALTH**  
**PERCOLATION TEST REPORT**

DEH Control #: \_\_\_\_\_  
Date: \_\_\_\_\_  
Activity Code: \_\_\_\_\_

Assessor's Parcel Number: 1241503500 Map # \_\_\_\_\_ Lot # 394  
Site Address 5820 W. Lilac Road Town: \_\_\_\_\_ Zip Code: 92003  
Owner: Ocean Breeze Farms, LLC Phone: \_\_\_\_\_  
Mailing Address: \_\_\_\_\_

Test Hole #	Test Depth	Stabilized Rate	Test Hole #	Test Depth	Stabilized Rate	Average Perc Rate
P101	49-61"	35	P105	39-51	13	51
P102	43-55"	31	P106	51-63	129	
P103	50-62"	42				
P104	49-61"	58				

*Vertical seepage pits: Provide soils log, uniformity/capacity test results, and calculations on separate 8-1/2" x 11" sheets of paper*

TYPE OF SOIL: (clay, silt, sand, decomposed granite, etc.)

Surface: Silty Sand (SM)  
2-5 ft. below surface: Clayey Sand (SC)  
\_\_\_\_\_ ft. below surface: \_\_\_\_\_  
\_\_\_\_\_ ft. below surface: \_\_\_\_\_  
\_\_\_\_\_ ft. below surface: \_\_\_\_\_

Depth to Refusal: NONE Depth to Groundwater: > 15'

**RECOMMENDATIONS:**

Septic Tank: 1500 gal Pump Chamber: \_\_\_\_\_ gal Surge Tank: \_\_\_\_\_ gal

Leach Line Length: 675 ft Seepage Pit Type: \_\_\_\_\_ Number of Pits: \_\_\_\_\_

Trench Depth: 5 ft Length: \_\_\_\_\_ ft Width: \_\_\_\_\_ ft

Rock below Pipe: 12" in Total Depth: \_\_\_\_\_ ft Cap Depth: \_\_\_\_\_ ft

Other: \_\_\_\_\_

Proposed Structure: 5-6 BEDROOM RESIDENTIAL

**WATER SUPPLY:**

Source of Potable Water: \_\_\_\_\_ Well Permit Number: \_\_\_\_\_

*I have reviewed this percolation data and design of the subsurface sewage disposal system for this parcel and find the data and design to be accurate and in compliance with state and local regulations, and good engineering practice.*

Registered CE, PE, Geologist, REHS: P. Frank CEG 1340

GeoSoils, Inc.  
Address: 5741 Palmen Way Phone: 760-938-3155 Date: 5-16-19  
Carlsbad, CA 92010

**FOR DEPARTMENT USE ONLY**

Approved: Yes \_\_\_\_ No \_\_\_\_ Date: \_\_\_\_\_ Final Map Required: Yes \_\_\_\_ No \_\_\_\_  
Specialist: \_\_\_\_\_ Date: \_\_\_\_\_  
Building Plan Review: \_\_\_\_\_ Date: \_\_\_\_\_  
Grading Inspection: \_\_\_\_\_ Date: \_\_\_\_\_  
Water Sample Analysis Results: \_\_\_\_\_ Date: \_\_\_\_\_





**COUNTY OF SAN DIEGO**  
**DEPARTMENT OF ENVIRONMENTAL HEALTH**  
**PERCOLATION TEST REPORT**

DEH Control #: \_\_\_\_\_  
Date: \_\_\_\_\_  
Activity Code: \_\_\_\_\_

Assessor's Parcel Number: 1241503500 Map # \_\_\_\_\_ Lot # 395  
Site Address 5820 W. LILAC ROAD Town: Bonsall Zip Code: 92003  
Owner: OCEAN BREEZE FARMS, LLC Phone: \_\_\_\_\_  
Mailing Address: \_\_\_\_\_

Test Hole #	Test Depth	Stabilized Rate	Test Hole #	Test Depth	Stabilized Rate	Average Perc Rate
P101	51-63	108	P105	60-72"	116	103
P102	48-60	7	P106	48-60"	110	
P103	48-60	139				
P104	46-58	138				

*Vertical seepage pits: Provide soils log, uniformity/capacity test results, and calculations on separate 8-1/2" x 11" sheets of paper*

TYPE OF SOIL: (clay, silt, sand, decomposed granite, etc.)

Surface: SILTY SAND (SM)  
2 ft. below surface: CLAYEY SAND (SC)  
\_\_\_\_ ft. below surface: \_\_\_\_\_  
\_\_\_\_ ft. below surface: \_\_\_\_\_  
4-5 ft. below surface: SAND w/Gravel Locally, otherwise CLAYEY SAND  
Depth to Refusal: NONE Depth to Groundwater: >15'

**RECOMMENDATIONS:**

Septic Tank: 1500 gal Pump Chamber: \_\_\_\_\_ gal Surge Tank: \_\_\_\_\_ gal  
Leach Line Length: 1200 ft Seepage Pit Type: \_\_\_\_\_ Number of Pits: \_\_\_\_\_  
Trench Depth: 5 ft Length: \_\_\_\_\_ ft Width: \_\_\_\_\_ ft  
Rock below Pipe: 18 in Total Depth: \_\_\_\_\_ ft Cap Depth: \_\_\_\_\_ ft  
Other: \_\_\_\_\_  
Proposed Structure: 5-6 BEDROOM RESIDENTIAL

**WATER SUPPLY:**

Source of Potable Water: \_\_\_\_\_ Well Permit Number: \_\_\_\_\_

*I have reviewed this percolation data and design of the subsurface sewage disposal system for this parcel and find the data and design to be accurate and in compliance with state and local regulations, and good engineering practice.*

Registered CE, PE, Geologist, REHS: John P. Tharrell CEG 1340  
GEOSOILS, INC.  
Address: 5741 PALMER WAY Phone: 760-438-3155 Date: 5-16-19  
Carlsbad, Ca. 92010

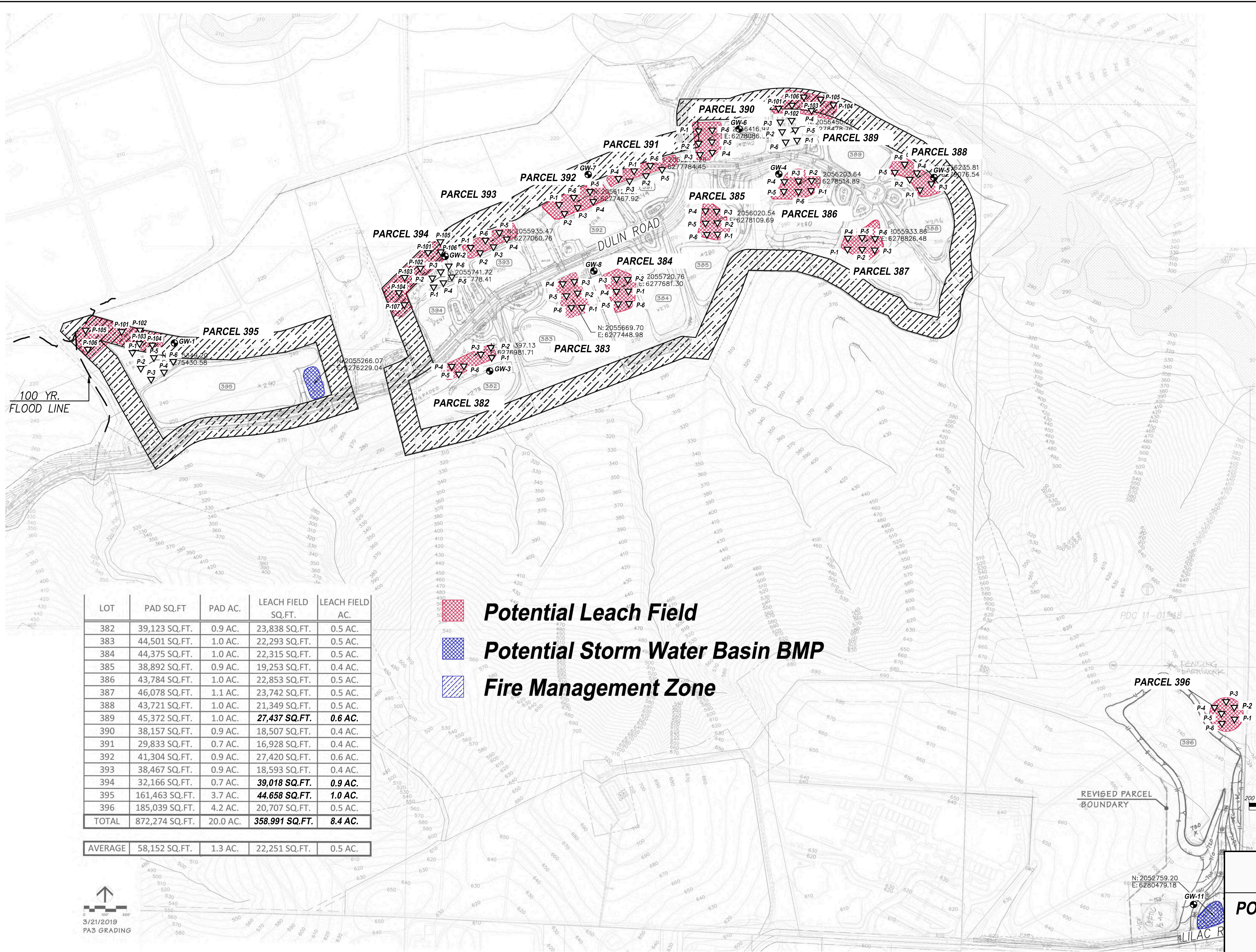
**FOR DEPARTMENT USE ONLY**

Approved: Yes \_\_\_\_ No \_\_\_\_ Date: \_\_\_\_\_ Final Map Required: Yes \_\_\_\_ No \_\_\_\_  
Specialist: \_\_\_\_\_ Date: \_\_\_\_\_  
Building Plan Review: \_\_\_\_\_ Date: \_\_\_\_\_  
Grading Inspection: \_\_\_\_\_ Date: \_\_\_\_\_  
Water Sample Analysis Results: \_\_\_\_\_ Date: \_\_\_\_\_

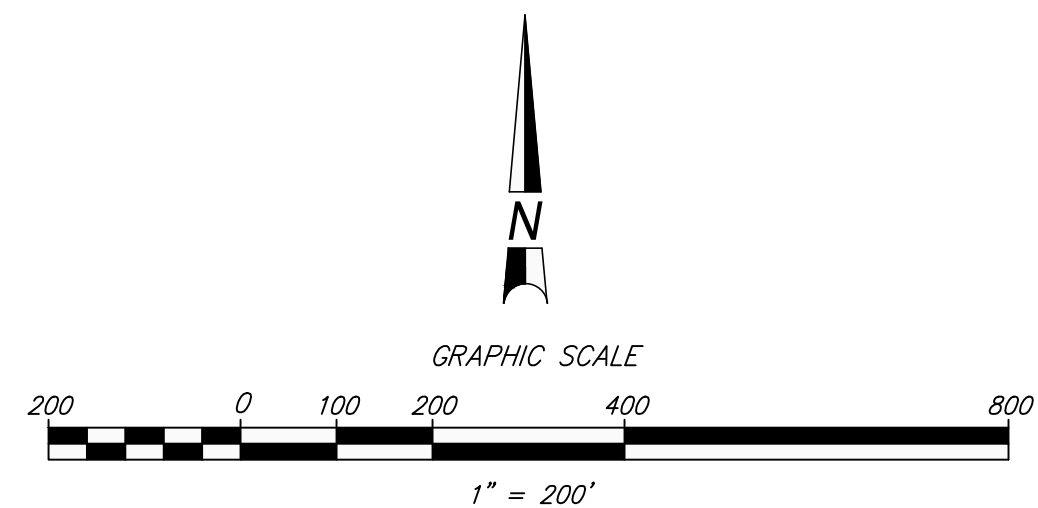
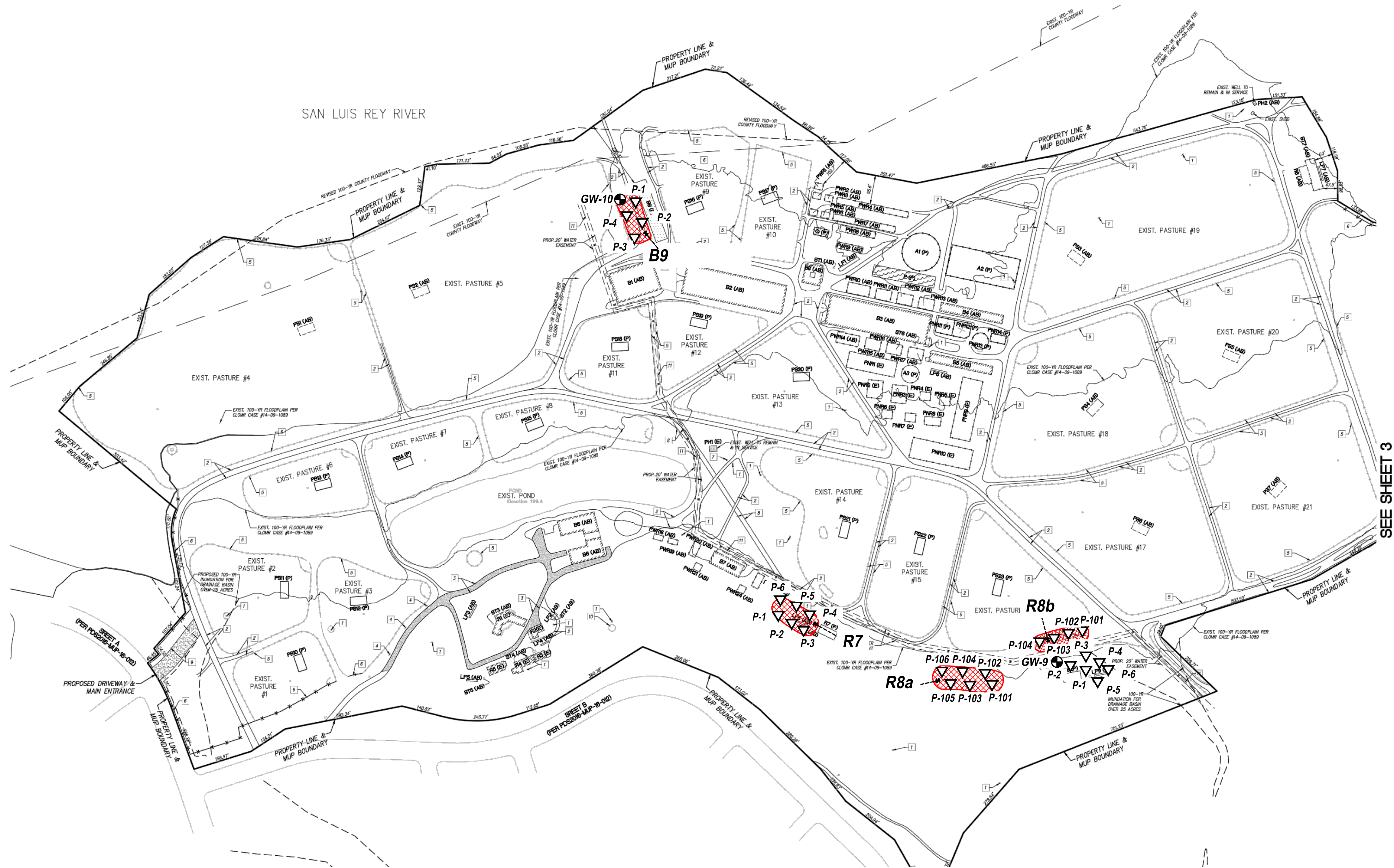


GSi LEGEND

- P-6 — APPROXIMATE LOCATION OF PERCOLATION TEST IN A GIVEN PARCEL AREA (GSI, 2019)
- P-106 — APPROXIMATE LOCATION OF PERCOLATION TEST IN A GIVEN PARCEL AREA (THIS STUDY)
- GW-11 — APPROXIMATE LOCATION OF GROUNDWATER TEST BORING IN A GIVEN PARCEL AREA







ALL LOCATIONS ARE APPROXIMATE  
This document or effile is not a part of the Construction Documents and should not be relied upon as being an accurate depiction of design.

### GSI LEGEND

- P-6** — APPROXIMATE LOCATION OF PERCOLATION TEST IN A GIVEN PARCEL AREA (GSI, 2019)
- P-106** — APPROXIMATE LOCATION OF PERCOLATION TEST IN A GIVEN PARCEL AREA (THIS STUDY)
- GW-11** — APPROXIMATE LOCATION OF GROUNDWATER TEST BORING IN A GIVEN PARCEL AREA
- R7** — APPROXIMATE LOCATION OF MOBILE HOME RESIDENTIAL, POTENTIAL LEACH FIELD AREA
- R8** — APPROXIMATE LOCATION OF MOBILE HOME RESIDENTIAL, POTENTIAL LEACH FIELD AREA
- B9** — APPROXIMATE LOCATION OF BARN/ SHOP LEACH FIELD AREA

### BUILDING LEGEND:

- |                                    |                                   |
|------------------------------------|-----------------------------------|
| <b>A</b> ARENA OR EXERCISER        | <b>FWR</b> FOWLING PENS WITH ROOF |
| <b>B1</b> SHOP/ EQUIPMENT STORAGE  | <b>LF</b> LEACH FIELD             |
| <b>B2</b> MARE BARN                | <b>M</b> MOBILE HOME              |
| <b>B4</b> LAY UP BARN REHAB        | <b>P</b> THERAPY POOL             |
| <b>B4</b> TRAINING BARN            | <b>PH</b> PUMP HOUSE              |
| <b>B5</b> TRAINING BARN            | <b>PNR</b> PENS NO ROOF           |
| <b>B6</b> STALLION BARN            | <b>PS</b> PASTURE SHED            |
| <b>B7</b> FOWLING BARN             | <b>PWR</b> PENS WITH ROOF         |
| <b>B8</b> BREEDING BARN            | <b>Q</b> QUARANTINE PEN           |
| <b>B9</b> SHOP                     | <b>R</b> RESIDENCE BUILDING       |
| <b>EH</b> RELOCATED EMPLOYEE HOUSE | <b>ST</b> SEPTIC TANK             |

### BUILDING STATUS LEGEND:

- |                      |   |
|----------------------|---|
| <b>(AB)</b> AS-BUILT | RECENTLY BUILT WITHOUT PRIOR PERMIT                       |
| <b>(E)</b> EXISTING  | EXISTING BUILDINGS/STRUCTURES WITH PERMIT                 |
| <b>(P)</b> PROPOSED  | PROPOSED NEW BUILDINGS/STRUCTURES REQUIRE BUILDING PERMIT |

### LEGEND:

- |                                |  |
|--------------------------------|--|
| <b>1</b> POWER POLE (EXIST.)   | <b>7</b> ELECTRIC TRANSFORMER (EXIST.) |
| <b>2</b> DIRT ROAD (EXIST.)    | <b>8</b> DIRT ROAD (PROPOSED)          |
| <b>3</b> ASPHALT ROAD (EXIST.) | <b>9</b> ASPHALT ROAD (PROPOSED)       |
| <b>4</b> LIGHT (EXIST.)        | <b>10</b> TANK (EXIST.)                |
| <b>5</b> WOOD FENCE (EXIST.)   | <b>11</b> WATER LINE (EXIST.)          |
| <b>6</b> WOOD FENCE (PROPOSED) |  |

BASE MAP FROM:

MAJOR USE PERMIT 5615  
EQUESTRIAN CENTER

**OCEAN BREEZE RANCH**

**PROJECT DESIGN CONSULTANTS**  
Planning | Landscape Architecture | Engineering | Survey

701 B Street, Suite 100  
San Diego, CA 92101  
619.226.9471 Tel  
619.226.0249 Fax

SHEET 2 OF 8



## POTENTIAL LEACH FIELD MAP BUILDING SITES R7, R8, B9 Revised Plate 2

W.O. 6960-A6-SC DATE: 05/19 SCALE: 1" = 200'



**PERCOLATION FEASIBILITY STUDY  
PLANNING AREA 3 OF OCEAN BREEZE RANCH  
INCLUDING RESIDENCES R7 AND R8, AND BARN B9  
COMMUNITY OF BONSALL  
SAN DIEGO COUNTY, CALIFORNIA**

**GeoSoils, Inc.**

**FOR**

**OCEAN BREEZE RANCH  
5820 WEST LILAC ROAD  
BONSALL, CALIFORNIA 92003**

**W.O. 6960-A6-SC    MAY 6, 2019**



**Geotechnical • Geologic • Coastal • Environmental**

5741 Palmer Way • Carlsbad, California 92010 • (760) 438-3155 • FAX (760) 931-0915 • [www.geosoilsinc.com](http://www.geosoilsinc.com)

May 6, 2019

W.O. 6960-A6-SC

**Ocean Breeze Ranch**

5820 West Lilac Road  
Bonsall, California 92003

Attention: Mr. Jim Conrad

Subject: Percolation Feasibility Study, Planning Area 3 of Ocean Breeze Ranch,  
Including Residences R7 and R8, and Barn B9, Community of Bonsall,  
San Diego County, California

Dear Mr. Conrad:

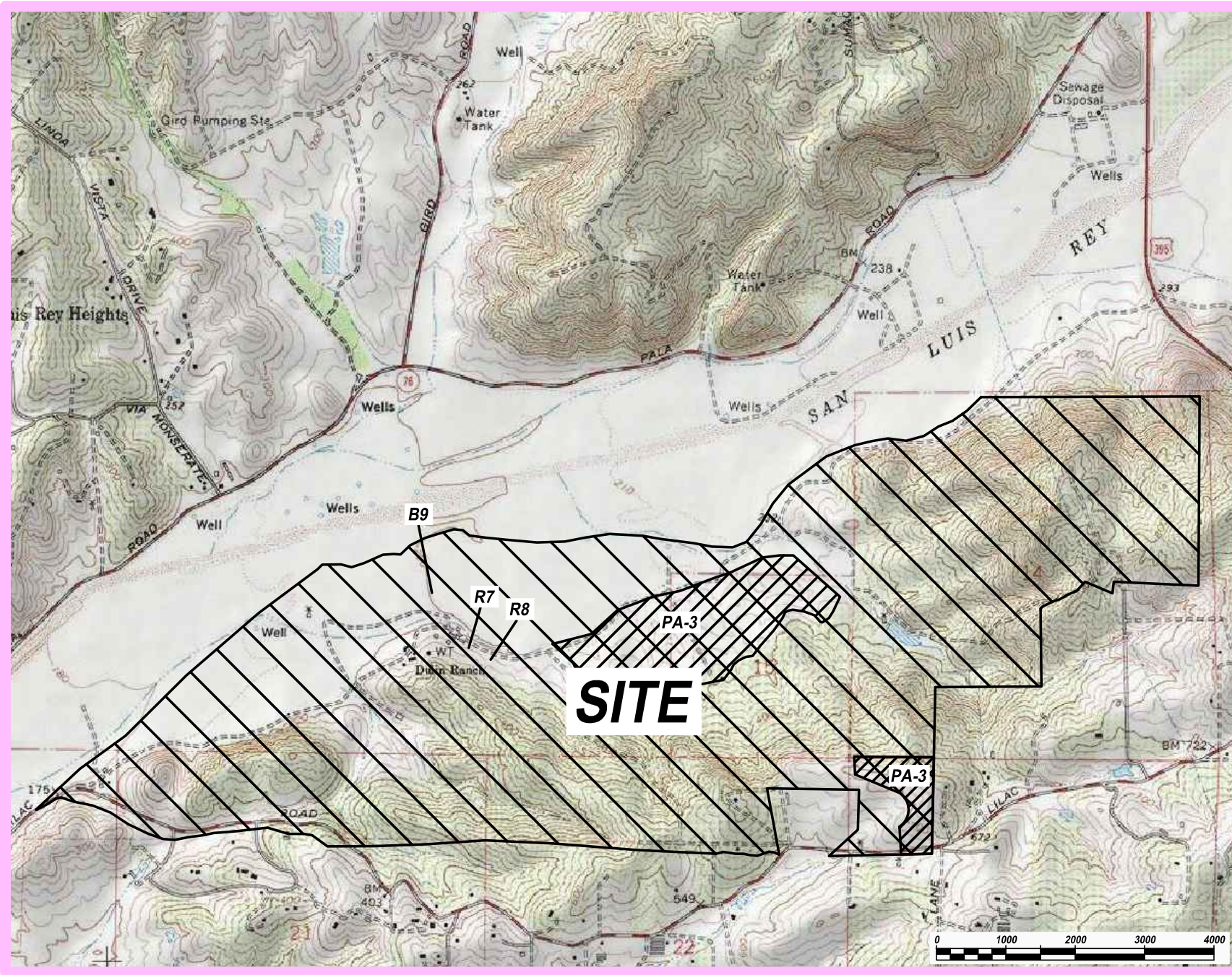
In accordance with your request and authorization, this report presents the results of GeoSoils, Inc.'s (GSI) percolation feasibility study for onsite wastewater treatment within Planning Area PA-3, and select sites within the existing equestrian center property, at Ocean Breeze Ranch, in the community of Bonsall, San Diego County, California (see Figure 1). This report was prepared to provide: site geologic and groundwater conditions; leach line percolation feasibility testing results; proposed onsite wastewater treatment system design criteria; and a general review of site conditions and proposed development.

**SCOPE OF SERVICES**

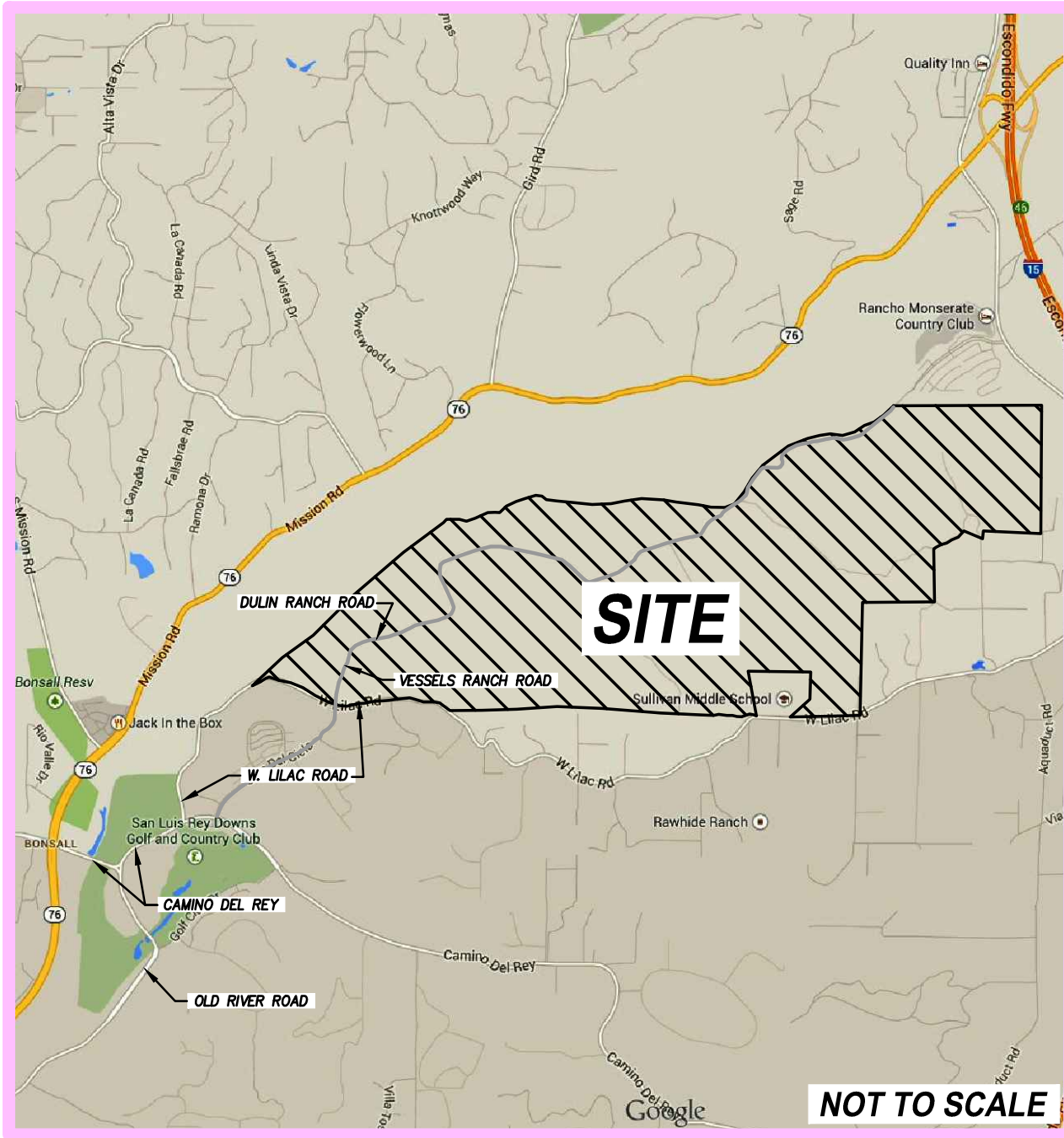
The scope of our services has included the following:

1. A review of available soils, geologic, and groundwater data for the site area including County design recommendations (see Appendix A).
2. A review of the "potential leach field and storm water basin BMP" exhibit, for building Parcel Nos. 382 through 396 (see Plate 1), which was provided by Project Design Consultants ([PDC], 2019).
3. Review of the "potential leach field sites in the vicinity of residential units (trailers) (R7 and R8), and barn/shop structure (B9), located within the equestrian center complex (see Plate 2), which was provided by Project Design Consultants ([PDC], 2019).



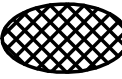


Base Map: TOPO!® ©2003 National Geographic, U.S.G.S. Bonsall Quadrangle, California -- San Diego Co., 7.5 Minute, dated 1975, current, 1975.



Base Map: Google Maps, Copyright 2015 Google, Map Data Copyright 2015 Google

# **GSi LEGEND**

-  — APPROXIMATE AREA OF PLANNING AREA 3
- R7** — APPROXIMATE LOCATION OF MOBILE HOME RESIDENTIAL, POTENTIAL LEACH FIELD AREA
- R8** — APPROXIMATE LOCATION OF MOBILE HOME RESIDENTIAL, POTENTIAL LEACH FIELD AREA
- B9** — APPROXIMATE LOCATION OF BARN/ SHOP LEACH FIELD AREA

This map is copyrighted by Google 2015. It is unlawful to copy or reproduce all or any part thereof, whether for personal use or resale, without permission. All rights reserved.



	<p>W.O. <b>6960-A6-SC</b></p>
<p><b>SITE LOCATION MAP</b></p>	

Figure 1



4. Excavation and geologic logging of four (4) to six (6) percolation test borings for each potential leach field(Appendix B).
5. Excavation and geologic logging of one (1) additional test boring within selected potential leach fields, for the evaluation of the presence of groundwater. Each boring was advanced to a minimum depth of  $\pm 15$  feet below the generally lowest existing surface elevation within the study area (Appendix B).
6. Evaluation of percolation rates (Appendix C), based on current onsite testing, as it relates to the currently proposed construction.
7. Technical illustration of the locations of field percolation testing and proposed location of other proposed/existing improvements (see Plates 1 and 2).
8. Provide preliminary OWTS designs (pending review and approval by the controlling authorities), and preparation of this report and accompaniments.

### **SITE DESCRIPTION**

The percolation study areas consist of 15 equestrian estate parcels located with Planning Area PA-3, two (2) residential sites located on the south side of the existing equestrian facility, and a barn/shop area, also located within the equestrian facility grounds. These study areas are generally located along the southern margin of the San Luis Rey River Valley, both north and south of the existing Dulin Ranch Road, in the community of Bonsall, San Diego County, California (see Figure 1).

Topographically, Estate Parcels 383 through 395, and the two (2) residential sites (R7 and R8) are located across a gentle, north facing slope, with slope gradients generally on the order of less than 4:1 (h:v). The barn/shop site (B9) is located within the relatively flat lying terrain surrounding the main equestrian facility. Estate Parcel 396 is located along a broad ridgeline with gentle, north facing slopes, near the southeast corner of the overall study area.

### **PROPOSED DEVELOPMENT**

Based upon our review of the attached Plates, it is our understanding that new development will consist of the construction of single family residential structures on 15 “equestrian estate” parcels within Planning area PA-3, two (2) smaller residential “trailers” (R7 and R8), and a barn/shop (B9), located withing the existing equestrian center grounds. On a preliminary basis, we anticipate that the residential structures on the estate lots would be five (5) to six (6) bedrooms, the trailer sites anticipated to consist of two (2) to three (3) bedrooms, and the barn/shop containing a bathroom and possibly a sink. Onsite wastewater treatment for the structures are proposed to be accommodated by a

new septic tank and conventional gravity fed leach field system. The approximate locations of the parcels/sites and potential leach field areas are shown on Plates 1 and 2.

## **GEOLOGY**

In the Bonsall area during the mid to late Pleistocene (within the Quaternary-age), the granitic rocks belonging to the Peninsular Ranges Batholith have been eroded and alluvial deposits have since filled the lower valleys. Regional mapping by Tan (2007) indicates that the site is primarily underlain by Cretaceous-age granitic rock referred to as the Couser Canyon Tonalite. Pleistocene-age older alluvium (stream terrace deposits), and younger alluvium associated with deposits along the San Luis Rey River, also occurs in the site vicinity (Tan, 2007).

Based on mapping performed by this office, flat-lying ground within Planning Area PA-3 in the vicinity of (primarily north of) Dulin Ranch Road, is underlain by Holocene alluvial sediments. Lower slopes descending to the flood plain, and flatter than about 4:1 (h:v), are developed on deposits of older alluvium (stream terrace deposits). Steeper slopes and upland areas south of Dulin Ranch Road are primarily underlain by granitic bedrock. In general, geologic/soil conditions within the vicinity of the proposed onsite wastewater treatment systems may be characterized as follows:

- Parcels 382 through 395, and residential “trailer” sites (R7 and R8) are underlain with colluvial topsoils developed on underlying deposits of older alluvium. Colluvium and older alluvium generally consist of clayey sands, sandy clays, and silty sands.
- Parcel 396 is underlain with colluvial topsoils developed on underlying Cretaceous-age granitic bedrock. The underlying granitics are highly weathered (decomposed granitic rock), exhibiting silty sand to sand textures. Drilling within the parcel indicated decomposed conditions to the maximum depth explored of 15 feet.
- The barn/shop area (B9 on Plate 2) is underlain with deposits of Holocene-age alluvium, generally consisting of silty sand and sand.

## **GROUNDWATER**

In preparation of GSI (2015), during the month of March, 2014, the regional groundwater table was encountered at depths on the order of 13½ to 15½ feet below existing grades in the relatively flat-lying, alluviated and flood plain areas along the northern edge of PA-3. These depths generally correspond to approximate elevations ranging from about 189½ feet above Mean Sea Level (MSL), up gradient (north of PA-3), to approximately 178 feet MSL, down gradient, in areas to the west of PA-3, R7, R8, and B9. During GSI’s

geotechnical evaluation (GSI, 2016a), groundwater was encountered in both the additional CPT soundings, and the hollow stem auger borings, at down gradient elevations of 178 to 179 feet MSL, west of PA-3. As such, groundwater levels appears to be relatively constant over the two-year period evaluated.

During this study, several “groundwater borings” were completed to depths of about 15 feet below grade throughout PA-3, and in the vicinity of sites R7, R8 and B9 (see Plate 1 and 2 for locations). Observations of these borings (GW-3 and GW-9) indicated some minor seepage at depth locally (likely due to recent rains), however, a subsurface water table was not encountered. To summarize, the groundwater elevation appears to be about 189 feet above Mean Sea Level (MSL) along the northern edge of PA-3, with the lowest parcel elevations (Parcels 391 through 395) at elevations on the order of 214 feet MSL to 232 feet MSL (i.e., about 25 to 43 feet above the groundwater table), or greater. In the vicinity of the barn/shop (B9), the ground elevation is approximately 206 feet MSL, with no groundwater encountered to an elevation of about 191 feet MSL. Residential sites R7 (approximate elevation of 210 to 214 feet MSL) and R8 (approximate elevation of 216 to 218 feet MSL) are also well above the groundwater elevations evaluated. Based on the current study, and in light of previous work, groundwater elevations appear to have remained relatively constant, and appear to be greater than 10 feet below the bottom of the proposed leach lines. It is unlikely that high historic groundwater elevations will encroach upon the minimum separation required between the bottom of the proposed leach field, and the highest groundwater anticipated.

### **LEACH FIELD PERCOLATION TESTING**

Six (6) test borings (P-1 through P-6) were advanced within each potential leach field area, located within PA-3, R7 and R8, with four (4) test borings completed for the barn/shop site (B9), for onsite wastewater treatment percolation feasibility testing, in general accordance with the controlling authorities requirements of County of San Diego, Department of Environmental Health, Local Agency Management Program (LAMP) for Onsite Wastewater Treatment Systems (2015), and San Diego County Department of Environmental Health ([SDCDEH], 2010a, and 2010b) for such testing. Percolation testing was performed within all of the boring excavations at depths of about 4 to 5 feet (see Appendix B) to evaluate site conditions with respect to the proposed OWTS. In addition, as per the requirements of the controlling authorities, one (1) relatively deep test boring (GW-1 through GW-11) was advanced within the vicinity of selected potential leach fields located at the lower elevations, or in isolated areas, to a depth of 15 feet, to assess the presence or absence of groundwater within 5 feet of the bottom elevations of the proposed leach fields, and to evaluate the depth to any underlying “hardpan.” Test holes were staked and flagged, and identified with a test hole number, the depth of the test boring, and the Lot number. The onsite percolation testing was performed by an engineering geologist from our firm. All percolation test data sheets are included in Appendix C. Procedures for testing are outlined briefly below:

## **Procedure**

- Test Holes:**
1. Auger borings (holes), a minimum of 6 inches in diameter, were advanced to a depth of approximately 5 feet.
  2. Upon completion of the test borings, the sides and bottom of the borings were scarified with a wire brush, and the loose material removed from the boring.
  3. After the holes were completed and cleaned, 2 inches of gravel was placed on the bottom of the hole.
  4. A perforated pipe was then installed within the hole to facilitate accurate field measurements and prevent caving during testing and the pre-soak period.

**Sandy Soil Test:** After the installation of the perforated pipe, the percolation cup was filled to approximately  $\pm 8$  inches over the gravel. Two (2) consecutive measurements were conducted at intervals of approximately 25 minutes. Less than 6 inches of water seeped away during each of the two (2) measurement intervals, therefore the pre-soak period was initiated.

**Pre-Soaking:** A water level of at least 12 to 14 inches was maintained above the gravel layer within each hole for a minimum of 4 hours, then allowed to fall overnight. After approximately 17 hours (the next day), the water in all test borings was observed to have completely seeped away. Based on this criteria, percolation testing was performed in accordance with methodology for CASE 2 conditions per LAMP (2015) and SDCDEH (2010b).

**Testing:** Percolation testing measurements were made the following day after required pre-soak period with respect to CASE 2 conditions. Water was brought to approximately 6 inches above the gravel layer and the drop in the water level was measured from a fixed reference point, refilling to  $\pm 6$  inches over the gravel after each measurement. The series of measurements were taken for a minimum of four (4) hours, at time intervals of 30 minutes. The percolation test reports are provided in Appendix C.

**Locations:** The locations of the percolation tests performed were chosen to correspond with the anticipated leach field areas relative to the proposed residential developments (see Plates 1 and 2). The locations of test areas were easily identified by measurements relative to existing improvements and features shown on Plates 1 and 2.

**Accuracy:** All test measurements were read to the nearest 1/16 of an inch.

Calculations from our field tests indicate that percolation rates (P-1 through P-6) at a depth of 3 to 5 feet vary from approximately 1.4 to 290 minutes/inch, however, most of the tests indicate rates ranging between 30 and 70 minutes/inch. The average percolation rate is applied for design, which also uses the average stabilization rate calculated from each individual percolation test. Based on our review of the data, the design percolation rate is recommended to use the average of the six (6) test results obtained (see Appendix C).

Based on the above, the following system designs and general recommendations are provided (pending review by the controlling authorities). The design parameters are based on DEH criteria, and our experience on sites with similar geologic conditions.

### **Onsite Wastewater Treatment (Leach Field) System Design**

As per the requirements of the controlling authorities, all onsite wastewater disposal systems should be located within native onsite soil materials.

Final approval of the OWTS design provided herein will be based on review by the SDCDEH. The following table, and “percolation test reports” (see Appendix C) present the percolation rates obtained during our investigation, and general design criteria.

PARCEL/BUILDING NUMBER	PERCOLATION RATE (t) IN MINUTES/INCH	NUMBER OF BEDROOMS	SEPTIC TANK SIZE (Gal.)	TOTAL LENGTH OF LEACH LINE (FT.)*
382	43.65	5-6	1,500	655
383	65.68	5-6	1,500	760
384	64.60	5-6	1,500	750
385	62.29	5-6	1,500	730
386	72.90	5-6	1,500	830
387	29.31	5-6	1,500	585
388	68.72	5-6	1,500	790
389***	264.09	5-6	1,500	--
390	43.49	5-6	1,500	655
391	35.76	5-6	1,500	615
392	50.45	5-6	1,500	675
393	48.45	5-6	1,500	675
394***	149.17	5-6	1,500	--
395***	290	5-6	1,500	--
396	20.69	5-6	1,500	530



PARCEL/BUILDING NUMBER	PERCOLATION RATE (t) IN MINUTES/INCH	NUMBER OF BEDROOMS	SEPTIC TANK SIZE (Gal.)	TOTAL LENGTH OF LEACH LINE (FT.)*
R7	118.06	2-3	1,000	1,425
R8***	141.22	2-3	1,000	--
**B9 (Shop)	1.38	1	1,000	200'
<p>* Note system design is for percolation trenches (Leach Lines) 4 feet deep x 1.5 feet wide, per LAMP (2015) and SDCDEH (2010a, 2010b)</p> <p>**An alternate design, based on commercial criteria presented in LAMP (2015)/SDCDEH (2010b) is presented below.</p> <p>***Percolation rates exceed the maximum percolation rate allowable (i.e., above 120 minutes/inch). Re-evaluation of these fields is recommended.</p>				

In addition to the above area, a 100 to 200 percent expansion area in case of primary system failure, will need to be included in design considerations. Any changes to the location of the proposed OWTs, the estimated size of the septic tank, or building use, should be reviewed by this office. Depending upon the nature of any changes, and the requirements of the reviewing entity, additional percolation testing may be warranted.

### **Parcels 389, 394, 395, and Residential Site R8**

Percolation testing to date indicated percolation rates in excess of the maximum allowed rate of 120 minutes/inch for onsite waste disposal. It is recommended that these potential fields are re-evaluated, including either percolation testing within other areas of the parcel(s), and/or testing at a greater depth.

### **Structure B9 (Shop)**

Based on the general requirements set forth in LAMP (2015) and SDCDEH (2010b) for commercial structures, the barn/shop may also be evaluated for "day workers at schools/offices per shift" (i.e., 15 gallons/person/day) x 2 to 6 persons, a "Flow" of 30 to 90 gallons/day has been evaluated. For Flow = 90 gallons/day, a 1,000-gallon septic tank should be utilized for design of the onsite wastewater treatment system.

PERCOLATION RATE (T) IN MINUTES/INCH	APPLICATION RATE (A.R.) IN GALLONS/FT <sup>2</sup> /DAY	ABSORPTION AREA REQUIRED (SQ FT.)	TOTAL LENGTH OF LEACH LINE (FT.)*
2	3.5	25	20' + 100 % Expansion Area

\* Note system design is for percolation trenches (Leach Lines) 4 feet deep x 1.5 feet wide, per LAMP (2015) and SDCDEH (2010a, and 2010b)

## **CONCLUSIONS AND RECOMMENDATIONS**

Based upon our review of the proposed development, our current leach line testing and engineering and geologic analyses, it is our opinion that the proposed OWTS for the project appear suitable for their intended use from a wastewater treatment and geologic feasibility viewpoint.

The following recommendations should be incorporated into the design and construction of the proposed onsite wastewater treatment systems. Based upon the leach line (infiltrator chamber) and seepage pit feasibility testing results obtained, our geologic and engineering analysis, design criteria established by LAMP and SDCDEH, the onsite wastewater treatment systems should be constructed as follows:

### **General**

1. Each leach line trench should be excavated into undisturbed native onsite materials. Each leach line trench should be a minimum of 4 feet deep, maximum of 5 feet deep, and 1.5 feet wide to correspond to the depths of testing conducted.
2. Any changes to the proposed property usage or changes/additions to the bathroom configurations/locations should be made in accordance with this report, and LAMP and SDCDEH requirements.
3. As per RWQCB requirements, water softening devices, requiring the use of soluble salts, are not to be utilized in conjunction with the OWTS (infiltrator chambers), as the soluble salts are known to adversely effect the quality of groundwater aquifers.
4. Observation by GSI and/or SDCDEH personnel should be completed during construction.

Based on the requirements of LAMP and SDCDEH, the following table presents some general setback criteria for onsite wastewater treatment systems:

<b>MINIMUM HORIZONTAL DISTANCE IN CLEAR FROM</b>	<b>TO SEPTIC TANK</b>	<b>TO LEACH FIELD</b>
Building or Structures	5 feet	8 feet
Property Line	5 feet	5 feet
Water Supply Wells	100 feet	100 feet
Septic Tank	----	5 feet
Drainage Course	-----	100 feet
Road Easements	----	8 feet
Onsite Domestic Water Service Line	----	25 feet

MINIMUM HORIZONTAL DISTANCE IN CLEAR FROM	TO SEPTIC TANK	TO LEACH FIELD
Cut slopes	----	5:1 (h:v) from top of cut slope
Leach Lines	5 feet	10 feet

Additional setback requirements are presented in LAMP (2015) and SDCDEH (2010a, and 2010b).

### **Onsite Wastewater Treatment System**

- Based on the available data presented within this report and utilizing the recommendations set forth, it is the judgement of this firm that there is sufficient area onsite for the newly proposed OWTS and the required 100 percent expansion areas that meet current codes and standards of the LAMP and SDCDEH requirements. It should be noted that percolation rates within Lots 389, 394, 395, and residence R8 exceed the maximum percolation rate of 120 minutes/inch and are considered unsuitable, per SDCDEH (2010a, 2010b), and should be further evaluated through the performance of additional percolation testing within the vicinity of the proposed leach field(s).
- As indicated previously, each leach line trench should be excavated into undisturbed native onsite materials. Each leach line trench should be a minimum of 3 feet to 5 feet deep, and 1.5 feet wide to correspond to the depths of testing conducted. Leach line construction shall be per LAMP (2015), and SDCDEH (2010a, 2010b).
- Based on the existing conditions and available data, it appears that the naturally occurring regional groundwater table will not encroach within 10 feet of the proposed onsite wastewater treatment systems.
- Based on the materials exposed in our test pits and our observations, the natural occurring body of minerals and organic matter at the proposed OWTS disposal area contains earthen materials classified per the United Soil Classification System ([USCS], 1979) as SM (silty sand), clayey sand/sandy clay (SC), and SP/SW (sand).
- Based on the available data presented within this report and field testing data accumulated, it is our professional opinion that groundwater will not encroach within the current allowable limit set forth by the LAMP and SDCDEH requirements.

## **PLAN REVIEW**

Once site development plans are available, these plans should be provided to this office for review and comment from an OWTS standpoint. Any proposed changes/additions to the bathroom configurations and/or locations should be made so that the proposed OWTS area is in accordance with this report. In addition, based on changes to the plans, if proposed, and/or final review by the County, additional percolation studies and/or field exploration may be necessary.

## **INVESTIGATION LIMITATIONS**

The materials encountered on the project site and utilized for our analysis are believed representative of the area; however, soil and bedrock materials vary in character between excavations and natural outcrops or conditions exposed during field testing and/or mass grading. Site conditions may vary due to seasonal changes or other factors.

Inasmuch as our study is based upon our review and engineering analyses and laboratory data, the conclusions and recommendations are professional opinions. These opinions have been derived in accordance with current standards of practice, and no warranty is express or implied. Standards of practice are subject to change with time. GSI assumes no responsibility or liability for work or testing performed by others, or their inaction; or work performed when GSI is not requested to be onsite, to evaluate if our recommendations have been properly implemented. Use of this report constitutes an agreement and consent by the user to all the limitations outlined above, notwithstanding any other agreements that may be in place. In addition, this report may be subject to review by the controlling authorities.

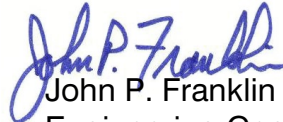
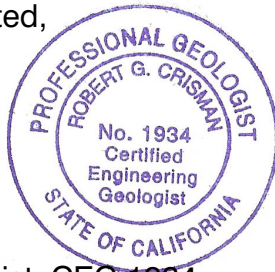
The opportunity to be of service is sincerely appreciated. If you should have any questions, please do not hesitate to contact our office.

Respectfully submitted,

**GeoSoils, Inc.**



Robert G. Crisman  
Engineering Geologist, CEG 1934



John P. Franklin  
Engineering Geologist, CEG 1340



MJS/RGC/JPF/jh

Attachments:      Appendix A - References  
                         Appendix B - Test Boring Logs (Groundwater Borings)  
                         Appendix C - Percolation Test Reports  
                         Plate 1 - Potential Leach Field Map PA-3  
                         Plate 2 - Potential Leach Field Map Building Sites R7, R8, B9

Distribution:      (4) Addressee

**APPENDIX A**  
**REFERENCES**

## **APPENDIX A**

### **REFERENCES**

- California Department of Water Resources, 2019, Water Data Library (<http://www.water.ca.gov/waterdatalibrary/>).
- California Department of Water Resources, 2003 (Interim Update 2016), California's groundwater, Bulletin 118, October update.
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- \_\_\_\_\_, 2016a, Geotechnical Evaluation for Ocean Breeze Ranch, Bonsall, San Diego County, California, W.O. 6960-A-SC, dated October 6.
- \_\_\_\_\_, 2016b, Geotechnical discussion of rock hardness, remedial earthwork, and earthwork balance factors, Ocean Breeze Ranch Planning Areas, PA-1, PA-2, and PA-3, Bonsall, San Diego County, California, W.O. 6960-A-SC, dated June 16.
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- Project Design Consultants, 2019, Ocean Breeze Ranch PA-3 Leach Field and Basin Infiltration Test Request, 100-scale plan, dated April 1.
- \_\_\_\_\_, 2018a, County of San Diego Tract 5615, Planned Development Major Use Permit, PDS 2016-MUR-16-012, Preliminary grading, Ocean Breeze Ranch, 100-scale, sheets 1-17, dated December
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- \_\_\_\_\_, 2010a, Onsite wastewater treatment systems (septic systems) permitting process and design, [www.sdcdeh.org](http://www.sdcdeh.org), dated March 22.
- \_\_\_\_\_, 2010b (Updated 2013), Design manual for onsite wastewater treatment systems, [www.sdcdeh.org](http://www.sdcdeh.org), dated March 22 (Updated November 25).
- Sowers and Sowers, 1979, Unified soil classification system (After U. S. Waterways Experiment Station and ASTM 02487-667) in Introductory soil mechanics, New York.

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**APPENDIX B**

**TEST BORING LOGS  
(GROUNDWATER BORINGS)**

# GeoSoils, Inc.

## BORING LOG

PROJECT: OCEAN BREEZE RANCH  
Planning Area 3 of Ocean Breeze Ranch  
Including Residences R7 and R8, and Barn B9

W.O. 6960-A6-SC BORING GW-1 SHEET 1 OF 1

DATE EXCAVATED 4/16/19 LOGGED BY: MK APPROX. ELEV.: 221' MSL

SAMPLE METHOD: Solid Flight Auger

Depth (ft.)	Sample			USCS Symbol	Dry Unit Wt. (pcf)	Moisture (%)	Saturation (%)	Material Description
	Bulk	Undisturbed	Blows/Ft.					
0				SC				@ 0' CLAYEY SAND, reddish brown, dry, loose; trace roots.
5								@ 3' CLAYEY SAND, dark brown, wet, loose to medium dense.
10								@ 6' CLAYEY SAND, brown, wet, dense.
15								Total Depth = 15' No Groundwater/Caving Encountered Backfilled 4-16-2019
20								
25								
30								

▼ Standard Penetration Test

▼ Groundwater

└ Undisturbed, Ring Sample

○ Seepage

GeoSoils, Inc.

PLATE B-1

# GeoSoils, Inc.

## BORING LOG

PROJECT: OCEAN BREEZE RANCH  
Planning Area 3 of Ocean Breeze Ranch  
Including Residences R7 and R8, and Barn B9

W.O. 6960-A6-SC BORING GW-2 SHEET 1 OF 1

DATE EXCAVATED 4/16/19 LOGGED BY: MK APPROX. ELEV.: 235' MSL

SAMPLE METHOD: Solid Flight Auger

Depth (ft.)	Sample			USCS Symbol	Dry Unit Wt. (pcf)	Moisture (%)	Saturation (%)	Material Description
	Bulk	Undisturbed	Blows/Ft.					
0				SC				@ 0' CLAYEY SAND, reddish brown, dry, loose.
5								@ 3' CLAYEY SAND, dark brown, damp, medium dense.
10								@ 7' CLAYEY SAND, brown, moist, medium dense to dense.
15								@ 12' CLAYEY SAND, dark brown, moist, dense.
20								Total Depth = 15'
25								No Groundwater/Caving Encountered
30								Backfilled 4-16-2019

▼ Standard Penetration Test

▼ Groundwater

└ Undisturbed, Ring Sample

○ Seepage

GeoSoils, Inc.

PLATE B-2

# GeoSoils, Inc.

# BORING LOG

PROJECT: OCEAN BREEZE RANCH  
Planning Area 3 of Ocean Breeze Ranch  
Including Residences R7 and R8, and Barn B9

W.O. 6960-A6-SC BORING GW-3 SHEET 1 OF 1

DATE EXCAVATED 4/16/19 LOGGED BY: MK APPROX. ELEV.: 260' MSL

SAMPLE METHOD: Solid Flight Auger

Depth (ft.)	Sample			USCS Symbol	Dry Unit Wt. (pcf)	Moisture (%)	Saturation (%)	Material Description
	Bulk	Undisturbed	Blows/Ft.					
0				SM/SC				@ 0' SILTY SAND/SILTY CLAY, brown, dry, loose; trace roots.
5				SC/CL				@ 4½' SILTY SAND/SANDY CLAY, dark brown, moist, loose.
7.5				CL				@ 7½' SANDY CLAY, dark brown, wet, medium dense. @ 7½' Water seepage zone.
13				SC				@ 13' CLAYEY SAND, grayish brown, wet, dense.
20								Total Depth = 20' Water Seepage Zone Encountered @ 7-8' No Caving Encountered Backfilled 4-16-19
25								
30								

▼ Standard Penetration Test

⊥ Undisturbed, Ring Sample

▼ Groundwater

○ Seepage

GeoSoils, Inc.

PLATE B-3

# GeoSoils, Inc.

## BORING LOG

PROJECT: OCEAN BREEZE RANCH  
Planning Area 3 of Ocean Breeze Ranch  
Including Residences R7 and R8, and Barn B9

W.O. 6960-A6-SC BORING GW-4 SHEET 1 OF 1

DATE EXCAVATED 4/17/19 LOGGED BY: MK APPROX. ELEV.: 266' MSL

SAMPLE METHOD: Solid Flight Auger

Depth (ft.)	Sample			USCS Symbol	Dry Unit Wt. (pcf)	Moisture (%)	Saturation (%)	Material Description
	Bulk	Undisturbed	Blows/Ft.					
0				SC/SM				@ 0' CLAYEY SAND/SILTY SAND, brown, dry, loose.
5								@ 3' CLAYEY SAND/SILTY SAND, dark brown, moist, medium dense/stiff.
10								@ 6' CLAYEY SAND/SILTY SAND, dark brown, moist, dense/stiff.
15								Total Depth = 15' No Groundwater/Caving Encountered Backfilled 4-17-2019
20								
25								
30								

▼ Standard Penetration Test

▼ Groundwater

└ Undisturbed, Ring Sample

○ Seepage

GeoSoils, Inc.

PLATE B-4

# GeoSoils, Inc.

## BORING LOG

PROJECT: OCEAN BREEZE RANCH  
Planning Area 3 of Ocean Breeze Ranch  
Including Residences R7 and R8, and Barn B9

W.O. 6960-A6-SC BORING GW-5 SHEET 1 OF 1

DATE EXCAVATED 4/17/19 LOGGED BY: MK APPROX. ELEV.: 289' MSL

SAMPLE METHOD: Solid Flight Auger

Depth (ft.)	Sample			USCS Symbol	Dry Unit Wt. (pcf)	Moisture (%)	Saturation (%)	Material Description
	Bulk	Undisturbed	Blows/Ft.					
0				SC				@ 0' CLAYEY SAND, reddish brown, dry, loose; trace roots.
5								@ 3½' CLAYEY SAND, brown, damp, loose to medium dense.
10				SM				@ 7' CLAYEY SAND, brown, moist, medium dense to dense.
15								@ 10' SILTY SAND, brown, moist, dense.
20								Total Depth = 15'
25								No Groundwater/Caving Encountered
30								Backfilled 4-17-2019

▼ Standard Penetration Test

▼ Groundwater

└ Undisturbed, Ring Sample

○ Seepage

GeoSoils, Inc.

PLATE B-5

# GeoSoils, Inc.

## BORING LOG

PROJECT: OCEAN BREEZE RANCH  
Planning Area 3 of Ocean Breeze Ranch  
Including Residences R7 and R8, and Barn B9

W.O. 6960-A6-SC BORING GW-6 SHEET 1 OF 1

DATE EXCAVATED 4/17/19 LOGGED BY: MK APPROX. ELEV.: 236' MSL

SAMPLE METHOD: Solid Flight Auger

Depth (ft.)	Sample			USCS Symbol	Dry Unit Wt. (pcf)	Moisture (%)	Saturation (%)	Material Description
	Bulk	Undisturbed	Blows/Ft.					
0				SC				@ 0' CLAYEY SAND, reddish brown, dry, loose.
5								@ 3' CLAYEY SAND, brown, damp, medium dense/stiff.
10								@ 6½' CLAYEY SAND, dark brown, wet, medium dense to dense.
15								Total Depth = 15' No Groundwater/Caving Encountered Backfilled 4-17-2019
20								
25								
30								

▼ Standard Penetration Test

⊥ Undisturbed, Ring Sample

▼ Groundwater

○ Seepage

GeoSoils, Inc.

PLATE B-6



# GeoSoils, Inc.

## BORING LOG

PROJECT: OCEAN BREEZE RANCH  
Planning Area 3 of Ocean Breeze Ranch  
Including Residences R7 and R8, and Barn B9

W.O. 6960-A6-SC BORING GW-7 SHEET 1 OF 1

DATE EXCAVATED 4/18/19 LOGGED BY: MK APPROX. ELEV.: 232' MSL

SAMPLE METHOD: Solid Flight Auger

Depth (ft.)	Sample			USCS Symbol	Dry Unit Wt. (pcf)	Moisture (%)	Saturation (%)	Material Description
	Bulk	Undisturbed	Blows/Ft.					
0				SC				@ 0' CLAYEY SAND, reddish brown, dry, loose.
5								@ 3½' CLAYEY SAND, reddish brown, damp, medium dense.
10								@ 8' CLAYEY SAND, yellowish brown, damp, medium dense to dense.
15								@ 12' CLAYEY SAND, grayish brown, damp, medium dense.
20								Total Depth = 15'
25								No Groundwater/Caving Encountered
30								Backfilled 4-18-2019

▼ Standard Penetration Test

⊥ Undisturbed, Ring Sample

≡ Groundwater

○ Seepage

GeoSoils, Inc.

PLATE B-7

# GeoSoils, Inc.

## BORING LOG

PROJECT: OCEAN BREEZE RANCH  
Planning Area 3 of Ocean Breeze Ranch  
Including Residences R7 and R8, and Barn B9

W.O. 6960-A6-SC BORING GW-8 SHEET 1 OF 1

DATE EXCAVATED 4/18/19 LOGGED BY: MK APPROX. ELEV.: 251' MSL

SAMPLE METHOD: Solid Flight Auger

Depth (ft.)	Sample			USCS Symbol	Dry Unit Wt. (pcf)	Moisture (%)	Saturation (%)	Material Description
	Bulk	Undisturbed	Blows/Ft.					
0				SC				@ 0' CLAYEY SAND, reddish brown, dry, loose; trace roots.
2 1/2								@ 2 1/2' CLAYEY SAND, reddish brown, damp, loose to medium dense.
4								@ 4' CLAYEY SAND, brown, moist, medium dense.
8 1/2				SC/CL				@ 8 1/2' CLAYEY SAND/CLAY, grayish brown, moist, dense/stiff.
15								Total Depth = 15' No Groundwater/Caving Encountered Backfilled 4-18-2019
20								
25								
30								

Standard Penetration Test

Groundwater

Undisturbed, Ring Sample

Seepage

GeoSoils, Inc.

PLATE B-8

# GeoSoils, Inc.

## BORING LOG

PROJECT: OCEAN BREEZE RANCH  
Planning Area 3 of Ocean Breeze Ranch  
Including Residences R7 and R8, and Barn B9

W.O. 6960-A6-SC BORING GW-9 SHEET 1 OF 1

DATE EXCAVATED 4/18/19 LOGGED BY: MK APPROX. ELEV.: 210' MSL

SAMPLE METHOD: Solid Flight Auger

Depth (ft.)	Sample			USCS Symbol	Dry Unit Wt. (pcf)	Moisture (%)	Saturation (%)	Material Description
	Bulk	Undisturbed	Blows/Ft.					
0				SC				@ 0' CLAYEY SAND, light brown, dry, loose.
				SM				@ 1' SILTY SAND, brown, damp, medium dense.
				CL				@ 3½' SANDY CLAY/CLAY, brown, damp, medium dense.
5								
								@ 7½' CLAY, olive brown, wet, stiff.
								@ 7½' Seepage into boring.
								@ 8' Seepage absent.
10								
15								Total Depth = 15'
								Seepage Zone from 7½'-8'
								No Caving Encountered
								Backfilled 4-18-2019
20								
25								
30								

▼ Standard Penetration Test

▼ Groundwater

└ Undisturbed, Ring Sample

○ Seepage

GeoSoils, Inc.

PLATE B-9

# GeoSoils, Inc.

# BORING LOG

PROJECT: OCEAN BREEZE RANCH  
Planning Area 3 of Ocean Breeze Ranch  
Including Residences R7and R8, and Barn B9

W.O. 6960-A6-SC BORING GW-10 SHEET 1 OF 1

DATE EXCAVATED 4/19/19 LOGGED BY: MK APPROX. ELEV.: 206' MSL

SAMPLE METHOD: Solid Flight Auger

Depth (ft.)	Sample			USCS Symbol	Dry Unit Wt. (pcf)	Moisture (%)	Saturation (%)	Material Description
	Bulk	Undisturbed	Blows/Ft.					
0				SP SM				@ 0' SAND with GRAVEL, light brown, dry, loose; fine to coarse grained.
								@ 1' SILTY SAND, brown, damp, loose to medium dense; traces of mica.
				SP- SM				@ 2½' SILTY SAND/SAND, grayish brown, moist, medium dense.
5								
								@ 7' SILTY SAND/SAND, grayish brown, wet, medium dense.
10								
								@ 11' SILTY SAND/SAND, grayish brown, wet, dense.
15								Total Depth = 15' No Groundwater/Caving Encountered Backfilled 4-19-2019
20								
25								
30								

Standard Penetration Test

Groundwater

Undisturbed, Ring Sample

Seepage

GeoSoils, Inc.

PLATE B-10

# GeoSoils, Inc.

## BORING LOG

PROJECT: OCEAN BREEZE RANCH  
Planning Area 3 of Ocean Breeze Ranch  
Including Residences R7 and R8, and Barn B9

W.O. 6960-A6-SC BORING GW-11 SHEET 1 OF 1

DATE EXCAVATED 4/19/19 LOGGED BY: MK APPROX. ELEV.: 675'

SAMPLE METHOD: Solid Flight Auger

Depth (ft.)	Sample			USCS Symbol	Dry Unit Wt. (pcf)	Moisture (%)	Saturation (%)	Material Description
	Bulk	Undisturbed	Blows/Ft.					
0				SC				@ 0' CLAYEY SAND, reddish brown, dry, loose.
3				SM				@ 3' SILTY SAND, brown, damp, medium dense.
5								@ 5' SILTY SAND, brown, moist, dense.
7 1/2								Refusal @ 7 1/2'
7 1/2								Total Depth = 7 1/2'
7 1/2								No Groundwater/Caving Encountered
7 1/2								Backfilled 4-19-19
10								
15								
20								
25								
30								

Standard Penetration Test

Groundwater

Undisturbed, Ring Sample

Seepage

GeoSoils, Inc.

PLATE B-11

**APPENDIX C**

**PERCOLATION TEST REPORTS**



**COUNTY OF SAN DIEGO**  
**DEPARTMENT OF ENVIRONMENTAL HEALTH**  
**PERCOLATION TEST REPORT**

DEH Control #: \_\_\_\_\_  
Date: \_\_\_\_\_  
Activity Code: \_\_\_\_\_

Assessor's Parcel Number: 1241503500 Map # \_\_\_\_\_ Lot # 382  
Site Address 5820 W. Lilac Road Town: Bonsall Zip Code: 92003  
Owner: OCEAN BREEZE FARMS, LLC Phone: \_\_\_\_\_  
Mailing Address: 5820 W. LILAC ROAD, BONSAII

Test Hole #	Test Depth (INCHES)	Stabilized Rate	Test Hole #	Test Depth (INCHES)	Stabilized Rate	Average Perc Rate
P1	47.75	38.02	P5	61.00	73.75	43.65
P2	52	52.67	P6	59.50	33.29	
P3	60.5	52.27				
P4	61.0	11.87				

*Vertical seepage pits: Provide soils log, uniformity/capacity test results, and calculations on separate 8-1/2" x 11" sheets of paper*

TYPE OF SOIL: (clay, silt, sand, decomposed granite, etc.)

Surface: SILTY SAND w/CLAY LIGHT BROWN, dry, LOOSE (SM)  
4 ft. below surface: SILTY SAND, DARK BROWN, moist, LOOSE-MEDIUM DENSE (SM)  
\_\_\_\_\_ ft. below surface: \_\_\_\_\_  
\_\_\_\_\_ ft. below surface: \_\_\_\_\_  
\_\_\_\_\_ ft. below surface: \_\_\_\_\_

Depth to Refusal: NONE Depth to Groundwater: NONE ENCOUNTERED

**RECOMMENDATIONS:**

Septic Tank: 1500 gal Pump Chamber: \_\_\_\_\_ gal Surge Tank: \_\_\_\_\_ gal  
Leach Line Length: 655 ft Seepage Pit Type: \_\_\_\_\_ Number of Pits: \_\_\_\_\_  
Trench Depth: 4 ft Length: \_\_\_\_\_ ft Width: \_\_\_\_\_ ft  
Rock below Pipe: 12 in Total Depth: \_\_\_\_\_ ft Cap Depth: \_\_\_\_\_ ft  
Other: \_\_\_\_\_  
Proposed Structure: Single Family Residential - 5-6 bdrm

**WATER SUPPLY:**

Source of Potable Water: \_\_\_\_\_ Well Permit Number: \_\_\_\_\_

*I have reviewed this percolation data and design of the subsurface sewage disposal system for this parcel and find the data and design to be accurate and in compliance with state and local regulations, and good engineering practice.*

Registered CE, PE, Geologist, REHS: \_\_\_\_\_

Address: 5741 Palmen Way Phone: 760-438-3155 Date: 5-6-19  
CARLSBAD, CA. 92010

**FOR DEPARTMENT USE ONLY**

Approved: Yes \_\_\_\_ No \_\_\_\_ Date: \_\_\_\_\_ Final Map Required: Yes \_\_\_\_ No \_\_\_\_  
Specialist: \_\_\_\_\_ Date: \_\_\_\_\_  
Building Plan Review: \_\_\_\_\_ Date: \_\_\_\_\_  
Grading Inspection: \_\_\_\_\_ Date: \_\_\_\_\_  
Water Sample Analysis Results: \_\_\_\_\_ Date: \_\_\_\_\_





**COUNTY OF SAN DIEGO**  
**DEPARTMENT OF ENVIRONMENTAL HEALTH**  
**PERCOLATION TEST REPORT**

DEH Control #: \_\_\_\_\_  
Date: \_\_\_\_\_  
Activity Code: \_\_\_\_\_

Assessor's Parcel Number: 1241503560 Map # \_\_\_\_\_ Lot # 383  
Site Address 5820 W. Lilac Road Town: Bonsall Zip Code: 92003  
Owner: Ocean Breeze Farms, LLC Phone: \_\_\_\_\_  
Mailing Address: 5820 W. Lilac Road, Bonsall

Test Hole #	Test Depth	Stabilized Rate	Test Hole #	Test Depth	Stabilized Rate	Average Perc Rate
P1	61.50"	57.00	P5	61.50"	36.87	65.68
P2	62.00"	85.56	P6	62.00"	64.00	
P3	66.00"	57.47				
P4	61.50"	93.20				

*Vertical seepage pits: Provide soils log, uniformity/capacity test results, and calculations on separate 8-1/2" x 11" sheets of paper*

**TYPE OF SOIL:** (clay, silt, sand, decomposed granite, etc.)

Surface: Clayey Sand, reddish Brown, loose, Dry (SC)  
2.5 ft. below surface: clayey Sand, reddish Brown, Medium dense - dense, Damp (SC)  
3.5 ft. below surface: Clayey Sand, Brown, med. dense, Damp (SC)  
\_\_\_\_ ft. below surface: \_\_\_\_\_  
\_\_\_\_ ft. below surface: \_\_\_\_\_  
Depth to Refusal: No Refusal Depth to Groundwater: None encountered

**RECOMMENDATIONS:**

Septic Tank: 1500 gal Pump Chamber: \_\_\_\_\_ gal Surge Tank: \_\_\_\_\_ gal  
Leach Line Length: 760 ft Seepage Pit Type: \_\_\_\_\_ Number of Pits: \_\_\_\_\_  
Trench Depth: 4 ft Length: \_\_\_\_\_ ft Width: \_\_\_\_\_ ft  
Rock below Pipe: 12 in Total Depth: \_\_\_\_\_ ft Cap Depth: \_\_\_\_\_ ft  
Other: \_\_\_\_\_  
Proposed Structure: Single Family Residential 5-6 bdrm

**WATER SUPPLY:**

Source of Potable Water: \_\_\_\_\_ Well Permit Number: \_\_\_\_\_

*I have reviewed this percolation data and design of the subsurface sewage disposal system for this parcel and find the data and design to be accurate and in compliance with state and local regulations, and good engineering practice.*

Registered CE, PE, Geologist, REHS: \_\_\_\_\_

Address: 5741 Palmer Way, Ste. D Phone: 760-438-3155 Date: 5-6-19  
CARLSBAD, CA. 92010

**FOR DEPARTMENT USE ONLY**

Approved: Yes \_\_\_\_ No \_\_\_\_ Date: \_\_\_\_\_ Final Map Required: Yes \_\_\_\_ No \_\_\_\_  
Specialist: \_\_\_\_\_ Date: \_\_\_\_\_  
Building Plan Review: \_\_\_\_\_ Date: \_\_\_\_\_  
Grading Inspection: \_\_\_\_\_ Date: \_\_\_\_\_  
Water Sample Analysis Results: \_\_\_\_\_ Date: \_\_\_\_\_



**COUNTY OF SAN DIEGO**  
**DEPARTMENT OF ENVIRONMENTAL HEALTH**  
**PERCOLATION TEST REPORT**

DEH Control #: \_\_\_\_\_  
Date: \_\_\_\_\_  
Activity Code: \_\_\_\_\_

Assessor's Parcel Number: 1241503500 Map # \_\_\_\_\_ Lot # 384  
Site Address 5820 W. Lilac Road Town: Bonsall Zip Code: 92003  
Owner: Ocean Breeze Farms, LLC Phone: \_\_\_\_\_  
Mailing Address: 5820 W. Lilac Road, Bonsall

Test Hole #	Test Depth	Stabilized Rate	Test Hole #	Test Depth	Stabilized Rate	Average Perc Rate
P1	59.00"	52.00	P5	59.00"	5.15	64.6
P2	61.50"	86.67	P6	50.50"	35.11	
P3	62.00"	82.67				
P4	59.75"	126.00				

*Vertical seepage pits: Provide soils log, uniformity/capacity test results, and calculations on separate 8-1/2" x 11" sheets of paper*

TYPE OF SOIL: (clay, silt, sand, decomposed granite, etc.)

Surface: Clayey Sand, Reddish Brown, dry, loose (SC)  
4 ft. below surface: Clayey Sand, Brown, Damp, Med. dense (SC)  
\_\_\_\_\_ ft. below surface: \_\_\_\_\_  
\_\_\_\_\_ ft. below surface: \_\_\_\_\_  
\_\_\_\_\_ ft. below surface: \_\_\_\_\_

Depth to Refusal: NO Refusal Depth to Groundwater: None encountered

**RECOMMENDATIONS:**

Septic Tank: 1500 gal Pump Chamber: \_\_\_\_\_ gal Surge Tank: \_\_\_\_\_ gal

Leach Line Length: 750 ft Seepage Pit Type: \_\_\_\_\_ Number of Pits: \_\_\_\_\_

Trench Depth: 4 ft Length: \_\_\_\_\_ ft Width: \_\_\_\_\_ ft

Rock below Pipe: 12 in Total Depth: \_\_\_\_\_ ft Cap Depth: \_\_\_\_\_ ft

Other: \_\_\_\_\_

Proposed Structure: Single Family Residential 5-6 bdrm

**WATER SUPPLY:**

Source of Potable Water: \_\_\_\_\_ Well Permit Number: \_\_\_\_\_

*I have reviewed this percolation data and design of the subsurface sewage disposal system for this parcel and find the data and design to be accurate and in compliance with state and local regulations, and good engineering practice.*

Registered CE, PE, Geologist, REHS: \_\_\_\_\_

Address: 5741 Palmen Way Ste. D Phone: 760-437-3155 Date: 5-6-19  
CARLSBAD, CA. 92010

FOR DEPARTMENT USE ONLY

Approved: Yes \_\_\_\_\_ No \_\_\_\_\_ Date: \_\_\_\_\_ Final Map Required: Yes \_\_\_\_\_ No \_\_\_\_\_  
Specialist: \_\_\_\_\_ Date: \_\_\_\_\_  
Building Plan Review: \_\_\_\_\_ Date: \_\_\_\_\_  
Grading Inspection: \_\_\_\_\_ Date: \_\_\_\_\_  
Water Sample Analysis Results: \_\_\_\_\_ Date: \_\_\_\_\_



**COUNTY OF SAN DIEGO**  
**DEPARTMENT OF ENVIRONMENTAL HEALTH**  
**PERCOLATION TEST REPORT**

DEH Control #: \_\_\_\_\_  
Date: \_\_\_\_\_  
Activity Code: \_\_\_\_\_

Assessor's Parcel Number: 1241503500 Map # \_\_\_\_\_ Lot # 385  
Site Address 5820 W. Lilac Road Town: Bonsall Zip Code: 92003  
Owner: Ocean Breeze Farms, LLC Phone: \_\_\_\_\_  
Mailing Address: 5820 W. Lilac Road, Bonsall

Test Hole #	Test Depth	Stabilized Rate	Test Hole #	Test Depth	Stabilized Rate	Average Perc Rate
P1	60.75"	43.43	P5	56.00"	66.4	62.29
P2	62.00"	64.8	P6	66.50"	80.34	
P3	59.50"	64				
P4	60.00"	54.75				

*Vertical seepage pits: Provide soils log, uniformity/capacity test results, and calculations on separate 8-1/2" x 11" sheets of paper*

**TYPE OF SOIL:** (clay, silt, sand, decomposed granite, etc.)

Surface: clayey sand, reddish brown, dry, loose (SC)  
2.5 ft. below surface: clayey sand brown, damp, medium dense (SC)  
4 ft. below surface: clayey sand, brown, moist, medium dense (SC)  
\_\_\_\_ ft. below surface: \_\_\_\_\_  
\_\_\_\_ ft. below surface: \_\_\_\_\_

Depth to Refusal: No Refusal Depth to Groundwater: None Encountered

**RECOMMENDATIONS:**

Septic Tank: 1500 gal Pump Chamber: \_\_\_\_\_ gal Surge Tank: \_\_\_\_\_ gal  
Leach Line Length: 730 ft Seepage Pit Type: \_\_\_\_\_ Number of Pits: \_\_\_\_\_  
Trench Depth: 4 ft Length: \_\_\_\_\_ ft Width: \_\_\_\_\_ ft  
Rock below Pipe: 12 in Total Depth: \_\_\_\_\_ ft Cap Depth: \_\_\_\_\_ ft  
Other: \_\_\_\_\_  
Proposed Structure: SINGLE FAMILY RESIDENTIAL 5-6 bdrm

**WATER SUPPLY:**

Source of Potable Water: \_\_\_\_\_ Well Permit Number: \_\_\_\_\_

*I have reviewed this percolation data and design of the subsurface sewage disposal system for this parcel and find the data and design to be accurate and in compliance with state and local regulations, and good engineering practice.*

Registered CE, PE, Geologist, REHS: \_\_\_\_\_

Address: 5741 Palmer Way Ste. D Phone: 760-438-3155 Date: 5-6-19  
Carlsbad, Ca. 92010

FOR DEPARTMENT USE ONLY

Approved: Yes \_\_\_\_ No \_\_\_\_ Date: \_\_\_\_\_ Final Map Required: Yes \_\_\_\_ No \_\_\_\_  
Specialist: \_\_\_\_\_ Date: \_\_\_\_\_  
Building Plan Review: \_\_\_\_\_ Date: \_\_\_\_\_  
Grading Inspection: \_\_\_\_\_ Date: \_\_\_\_\_  
Water Sample Analysis Results: \_\_\_\_\_ Date: \_\_\_\_\_



**COUNTY OF SAN DIEGO**  
**DEPARTMENT OF ENVIRONMENTAL HEALTH**  
**PERCOLATION TEST REPORT**

DEH Control #: \_\_\_\_\_  
Date: \_\_\_\_\_  
Activity Code: \_\_\_\_\_

Assessor's Parcel Number: 1241503500 Map # \_\_\_\_\_ Lot # 386  
Site Address 5820 W. Lilac Road Town: Bonsall Zip Code: 92003  
Owner: Olean Breeze Farms, LLC Phone: \_\_\_\_\_  
Mailing Address: 5820 W. Lilac Road, Bonsall

Test Hole #	Test Depth	Stabilized Rate	Test Hole #	Test Depth	Stabilized Rate	Average Perc Rate
P1	66.50"	42.55	P5	58.00"	36.67	72.90
P2	59.00"	79.33	P6	65.00"	116.00	
P3	63.00"	156				
P4	61.50"	12.89				

*Vertical seepage pits: Provide soils log, uniformity/capacity test results, and calculations on separate 8-1/2" x 11" sheets of paper*

TYPE OF SOIL: (clay, silt, sand, decomposed granite, etc.)

Surface: Clayey Sand/ Silty sand, Brown, Dry, loose (SC/SM)  
3 ft. below surface: Clayey Sand/ Silty Sand, Dark Brown, Moist, Med. Dense/stiff (SC/SM)  
\_\_\_\_ ft. below surface: \_\_\_\_\_  
\_\_\_\_ ft. below surface: \_\_\_\_\_  
\_\_\_\_ ft. below surface: \_\_\_\_\_  
Depth to Refusal: No Refusal Depth to Groundwater: None encountered

**RECOMMENDATIONS:**

Septic Tank: 1500 gal Pump Chamber: \_\_\_\_\_ gal Surge Tank: \_\_\_\_\_ gal  
Leach Line Length: 836 ft Seepage Pit Type: \_\_\_\_\_ Number of Pits: \_\_\_\_\_  
Trench Depth: 4 ft Length: \_\_\_\_\_ ft Width: \_\_\_\_\_ ft  
Rock below Pipe: 12 in Total Depth: \_\_\_\_\_ ft Cap Depth: \_\_\_\_\_ ft  
Other: \_\_\_\_\_  
Proposed Structure: Single Family Residential 5-6 bdrm

**WATER SUPPLY:**

Source of Potable Water: \_\_\_\_\_ Well Permit Number: \_\_\_\_\_

*I have reviewed this percolation data and design of the subsurface sewage disposal system for this parcel and find the data and design to be accurate and in compliance with state and local regulations, and good engineering practice.*

Registered CE, PE, Geologist, REHS: \_\_\_\_\_

Address: 5741 Palmer Way, Ste. D Phone: 760-438-3155 Date: 5-6-19  
Carlsbad, CA. 92010

FOR DEPARTMENT USE ONLY

Approved: Yes \_\_\_\_\_ No \_\_\_\_\_ Date: \_\_\_\_\_ Final Map Required: Yes \_\_\_\_\_ No \_\_\_\_\_  
Specialist: \_\_\_\_\_ Date: \_\_\_\_\_  
Building Plan Review: \_\_\_\_\_ Date: \_\_\_\_\_  
Grading Inspection: \_\_\_\_\_ Date: \_\_\_\_\_  
Water Sample Analysis Results: \_\_\_\_\_ Date: \_\_\_\_\_



**COUNTY OF SAN DIEGO**  
**DEPARTMENT OF ENVIRONMENTAL HEALTH**  
**PERCOLATION TEST REPORT**

DEH Control #: \_\_\_\_\_  
Date: \_\_\_\_\_  
Activity Code: \_\_\_\_\_

Assessor's Parcel Number: 1241503500 Map # \_\_\_\_\_ Lot # 387  
Site Address 5820 W. Lilac Road Town: Bonsall Zip Code: 92003  
Owner: Ocean Breeze Farms, LLC Phone: \_\_\_\_\_  
Mailing Address: 5820 W. Lilac Road, Bonsall

Test Hole #	Test Depth	Stabilized Rate	Test Hole #	Test Depth	Stabilized Rate	Average Perc Rate
P1	57.00"	11.79	P5	63.00"	12.27	29.31
P2	52.00"	14.86	P6	60.00"	6.60	
P3	55.00"	12.567				
P4	50.00"	4.67				

*Vertical seepage pits: Provide soils log, uniformity/capacity test results, and calculations on separate 8-1/2" x 11" sheets of paper*

**TYPE OF SOIL:** (clay, silt, sand, decomposed granite, etc.)

Surface: Silty Sand, Reddish Brown, Dry, loose (SM)  
2.5 ft. below surface: Silty sand, Yellowish Brown, Dry, med. Dense to Dense (SM)  
\_\_\_\_ ft. below surface: \_\_\_\_\_  
\_\_\_\_ ft. below surface: \_\_\_\_\_  
\_\_\_\_ ft. below surface: \_\_\_\_\_

Depth to Refusal: No Refusal Depth to Groundwater: None encountered

**RECOMMENDATIONS:**

Septic Tank: 1500 gal Pump Chamber: \_\_\_\_\_ gal Surge Tank: \_\_\_\_\_ gal  
Leach Line Length: 585 ft Seepage Pit Type: \_\_\_\_\_ Number of Pits: \_\_\_\_\_  
Trench Depth: 4 ft Length: \_\_\_\_\_ ft Width: \_\_\_\_\_ ft  
Rock below Pipe: 12 in Total Depth: \_\_\_\_\_ ft Cap Depth: \_\_\_\_\_ ft  
Other: \_\_\_\_\_  
Proposed Structure: Single Family Residential 5-6 bdrm

**WATER SUPPLY:**

Source of Potable Water: \_\_\_\_\_ Well Permit Number: \_\_\_\_\_

*I have reviewed this percolation data and design of the subsurface sewage disposal system for this parcel and find the data and design to be accurate and in compliance with state and local regulations, and good engineering practice.*

Registered CE, PE, Geologist, REHS: \_\_\_\_\_

Address: 5741 Palmen Way, Ste. 12 Phone: 760-438-3155 Date: 5-6-19  
CARLSBAD, CA. 92010

**FOR DEPARTMENT USE ONLY**

Approved: Yes \_\_\_\_ No \_\_\_\_ Date: \_\_\_\_\_ Final Map Required: Yes \_\_\_\_ No \_\_\_\_  
Specialist: \_\_\_\_\_ Date: \_\_\_\_\_  
Building Plan Review: \_\_\_\_\_ Date: \_\_\_\_\_  
Grading Inspection: \_\_\_\_\_ Date: \_\_\_\_\_  
Water Sample Analysis Results: \_\_\_\_\_ Date: \_\_\_\_\_



**COUNTY OF SAN DIEGO**  
**DEPARTMENT OF ENVIRONMENTAL HEALTH**  
**PERCOLATION TEST REPORT**

DEH Control #: \_\_\_\_\_  
Date: \_\_\_\_\_  
Activity Code: \_\_\_\_\_

Assessor's Parcel Number: 1241503500 Map # \_\_\_\_\_ Lot # 388  
Site Address 5820 W. Lilac Road Town: Bonsall Zip Code: 92003  
Owner: Ocean Breeze Farms, LLC Phone: \_\_\_\_\_  
Mailing Address: 5820 W. Lilac Road, Bonsall

Test Hole #	Test Depth	Stabilized Rate	Test Hole #	Test Depth	Stabilized Rate	Average Perc Rate
P1	61.50"	66.00	P5	62.50"	45.33	68.72
P2	59.50"	33.00	P6	60.50"	68.00	
P3	61.00"	132.00				
P4	61.50"	68.00				

*Vertical seepage pits: Provide soils log, uniformity/capacity test results, and calculations on separate 8-1/2" x 11" sheets of paper*

TYPE OF SOIL: (clay, silt, sand, decomposed granite, etc.)

Surface: Clayey Sand, Reddish Brown, Dry, loose (SC)  
3.5 ft. below surface: Clayey Sand, Brown, Damp, Med. Dense (SC)  
\_\_\_\_\_ ft. below surface: \_\_\_\_\_  
\_\_\_\_\_ ft. below surface: \_\_\_\_\_  
\_\_\_\_\_ ft. below surface: \_\_\_\_\_

Depth to Refusal: No Refusal Depth to Groundwater: None encountered

**RECOMMENDATIONS:**

Septic Tank: 1500 gal Pump Chamber: \_\_\_\_\_ gal Surge Tank: \_\_\_\_\_ gal  
Leach Line Length: 790 ft Seepage Pit Type: \_\_\_\_\_ Number of Pits: \_\_\_\_\_  
Trench Depth: 4 ft Length: \_\_\_\_\_ ft Width: \_\_\_\_\_ ft  
Rock below Pipe: 12 in Total Depth: \_\_\_\_\_ ft Cap Depth: \_\_\_\_\_ ft

Other: \_\_\_\_\_

Proposed Structure: Single Family RESIDENTIAL 5-6 bdrm

**WATER SUPPLY:**

Source of Potable Water: \_\_\_\_\_ Well Permit Number: \_\_\_\_\_

*I have reviewed this percolation data and design of the subsurface sewage disposal system for this parcel and find the data and design to be accurate and in compliance with state and local regulations, and good engineering practice.*

Registered CE, PE, Geologist, REHS: \_\_\_\_\_

Address: 5741 Palmer Way, Ste. D Phone: 760-438-3155 Date: 5-6-19  
Carlsbad, Ca. 92010

**FOR DEPARTMENT USE ONLY**

Approved: Yes \_\_\_\_\_ No \_\_\_\_\_ Date: \_\_\_\_\_ Final Map Required: Yes \_\_\_\_\_ No \_\_\_\_\_  
Specialist: \_\_\_\_\_ Date: \_\_\_\_\_  
Building Plan Review: \_\_\_\_\_ Date: \_\_\_\_\_  
Grading Inspection: \_\_\_\_\_ Date: \_\_\_\_\_  
Water Sample Analysis Results: \_\_\_\_\_ Date: \_\_\_\_\_



**COUNTY OF SAN DIEGO**  
**DEPARTMENT OF ENVIRONMENTAL HEALTH**  
**PERCOLATION TEST REPORT**

DEH Control #: \_\_\_\_\_  
Date: \_\_\_\_\_  
Activity Code: \_\_\_\_\_

Assessor's Parcel Number: 1241503500 Map # \_\_\_\_\_ Lot # 381  
Site Address 5820 W. Lilac Road Town: Bonsall Zip Code: 92003  
Owner: Ocean Breeze Farms, LLC Phone: \_\_\_\_\_  
Mailing Address: 5820 W. Lilac Road, Bonsall

Test Hole #	Test Depth	Stabilized Rate	Test Hole #	Test Depth	Stabilized Rate	Average Perc Rate
P1	61.50"	460	P5	61.00"	87.20	264.09
P2	61.00"	228	P6	62.50"	153.33	
P3	61.00"	436				
P4	45.60"	220				

*Vertical seepage pits: Provide soils log, uniformity/capacity test results, and calculations on separate 8-1/2" x 11" sheets of paper*

TYPE OF SOIL: (clay, silt, sand, decomposed granite, etc.)

Surface: Clayey Sand, Reddish Brown, Dry, loose (SC)  
3 ft. below surface: Clayey Sand, Reddish Brown, Damp, Med. dense / STIFF (SC)  
\_\_\_\_ ft. below surface: \_\_\_\_\_  
\_\_\_\_ ft. below surface: \_\_\_\_\_  
\_\_\_\_ ft. below surface: \_\_\_\_\_

Depth to Refusal: No Refusal Depth to Groundwater: None Encountered

**RECOMMENDATIONS:**

Septic Tank: 1500 gal Pump Chamber: \_\_\_\_\_ gal Surge Tank: \_\_\_\_\_ gal  
Leach Line Length: \_\_\_\_\_ ft Seepage Pit Type: \_\_\_\_\_ Number of Pits: \_\_\_\_\_  
Trench Depth: 4 ft Length: \_\_\_\_\_ ft Width: \_\_\_\_\_ ft  
Rock below Pipe: 12 in Total Depth: \_\_\_\_\_ ft Cap Depth: \_\_\_\_\_ ft  
Other: RATE EXCEEDS 120 min/in RECOMMEND BETEST  
Proposed Structure: Single Family Residential 5-6 bdrm

**WATER SUPPLY:**

Source of Potable Water: \_\_\_\_\_ Well Permit Number: \_\_\_\_\_

*I have reviewed this percolation data and design of the subsurface sewage disposal system for this parcel and find the data and design to be accurate and in compliance with state and local regulations, and good engineering practice.*

Registered CE, PE, Geologist, REHS: \_\_\_\_\_

Address: 5741 PALMER WAY, STE. D Phone: 760-438-3155 Date: 5-6-19

**FOR DEPARTMENT USE ONLY**

Approved: Yes \_\_\_\_ No \_\_\_\_ Date: \_\_\_\_\_ Final Map Required: Yes \_\_\_\_ No \_\_\_\_  
Specialist: \_\_\_\_\_ Date: \_\_\_\_\_  
Building Plan Review: \_\_\_\_\_ Date: \_\_\_\_\_  
Grading Inspection: \_\_\_\_\_ Date: \_\_\_\_\_  
Water Sample Analysis Results: \_\_\_\_\_ Date: \_\_\_\_\_



**COUNTY OF SAN DIEGO**  
**DEPARTMENT OF ENVIRONMENTAL HEALTH**  
**PERCOLATION TEST REPORT**

DEH Control #: \_\_\_\_\_  
Date: \_\_\_\_\_  
Activity Code: \_\_\_\_\_

Assessor's Parcel Number: 1241503500 Map # \_\_\_\_\_ Lot # 390  
Site Address 5820 W. Lila Road Town: Bonsall Zip Code: 92003  
Owner: Ocean Breeze Farms, LLC Phone: \_\_\_\_\_  
Mailing Address: 5820 W. Lila Road, Bonsall

Test Hole #	Test Depth	Stabilized Rate	Test Hole #	Test Depth	Stabilized Rate	Average Perc Rate
P1	44.25"	28.31	P5	64.75"	22.75	43.49
P2	55.75"	40.89	P6	62.50"	52	
P3	60.75"	72				
P4	59.00"	45				

*Vertical seepage pits: Provide soils log, uniformity/capacity test results, and calculations on separate 8-1/2" x 11" sheets of paper*

**TYPE OF SOIL:** (clay, silt, sand, decomposed granite, etc.)

Surface: Clayey Sand, Reddish Brown, Dry, loose (SC)  
3 ft. below surface: Clayey Sand/Sandy Clay, Brown, Damp, Med. Dense/Stiff (SC/CL)  
\_\_\_\_ ft. below surface: \_\_\_\_\_  
\_\_\_\_ ft. below surface: \_\_\_\_\_  
\_\_\_\_ ft. below surface: \_\_\_\_\_  
Depth to Refusal: No Refusal Depth to Groundwater: None encountered

**RECOMMENDATIONS:**

Septic Tank: 1500 gal Pump Chamber: \_\_\_\_\_ gal Surge Tank: \_\_\_\_\_ gal  
Leach Line Length: 655 ft Seepage Pit Type: \_\_\_\_\_ Number of Pits: \_\_\_\_\_  
Trench Depth: \_\_\_\_\_ ft Length: \_\_\_\_\_ ft Width: \_\_\_\_\_ ft  
Rock below Pipe: 12 in Total Depth: \_\_\_\_\_ ft Cap Depth: \_\_\_\_\_ ft  
Other: \_\_\_\_\_  
Proposed Structure: SINGLE FAMILY RESIDENTIAL 5-6 bdrm

**WATER SUPPLY:**

Source of Potable Water: \_\_\_\_\_ Well Permit Number: \_\_\_\_\_

*I have reviewed this percolation data and design of the subsurface sewage disposal system for this parcel and find the data and design to be accurate and in compliance with state and local regulations, and good engineering practice.*

Registered CE, PE, Geologist, REHS: \_\_\_\_\_

Address: 5741 Palmen Way, Ste. D Phone: 760-438-3155 Date: 5-6-19  
CARLSBAD, Ca.

**FOR DEPARTMENT USE ONLY**

Approved: Yes \_\_\_\_ No \_\_\_\_ Date: \_\_\_\_\_ Final Map Required: Yes \_\_\_\_ No \_\_\_\_  
Specialist: \_\_\_\_\_ Date: \_\_\_\_\_  
Building Plan Review: \_\_\_\_\_ Date: \_\_\_\_\_  
Grading Inspection: \_\_\_\_\_ Date: \_\_\_\_\_  
Water Sample Analysis Results: \_\_\_\_\_ Date: \_\_\_\_\_





**COUNTY OF SAN DIEGO**  
**DEPARTMENT OF ENVIRONMENTAL HEALTH**  
**PERCOLATION TEST REPORT**

DEH Control #: \_\_\_\_\_  
Date: \_\_\_\_\_  
Activity Code: \_\_\_\_\_

Assessor's Parcel Number: 1241503500 Map # \_\_\_\_\_ Lot # 391  
Site Address 5820 W. Wiala Road Town: Bonsall Zip Code: 92003  
Owner: Ocean Breeze Farms, LLC Phone: \_\_\_\_\_  
Mailing Address: 5820 W. Wiala Road, Bonsall

Test Hole #	Test Depth	Stabilized Rate	Test Hole #	Test Depth	Stabilized Rate	Average Perc Rate
P1	60.50"	23.54	P5	54.75"	59	35.76
P2	62.00"	34.03	P6	62.25"	71.56	
P3	67.75"	17.31				
P4	66.50"	22.65				

*Vertical seepage pits: Provide soils log, uniformity/capacity test results, and calculations on separate 8-1/2" x 11" sheets of paper*

TYPE OF SOIL: (clay, silt, sand, decomposed granite, etc.)

Surface: Clayey Sand, Reddish Brown, Dry, Loose (sc)  
3.5 ft. below surface: Clayey Sand, Greyish Brown, Damp, Med. Dense (sc)  
\_\_\_\_\_ ft. below surface: \_\_\_\_\_  
\_\_\_\_\_ ft. below surface: \_\_\_\_\_  
\_\_\_\_\_ ft. below surface: \_\_\_\_\_

Depth to Refusal: No Refusal Depth to Groundwater: None encountered

**RECOMMENDATIONS:**

Septic Tank: 1500 gal Pump Chamber: \_\_\_\_\_ gal Surge Tank: \_\_\_\_\_ gal  
Leach Line Length: 615 ft Seepage Pit Type: \_\_\_\_\_ Number of Pits: \_\_\_\_\_  
Trench Depth: 4 ft Length: \_\_\_\_\_ ft Width: \_\_\_\_\_ ft  
Rock below Pipe: 12 in Total Depth: \_\_\_\_\_ ft Cap Depth: \_\_\_\_\_ ft  
Other: \_\_\_\_\_  
Proposed Structure: SINGLE Family Residential 5-6 bdrm

**WATER SUPPLY:**

Source of Potable Water: \_\_\_\_\_ Well Permit Number: \_\_\_\_\_

*I have reviewed this percolation data and design of the subsurface sewage disposal system for this parcel and find the data and design to be accurate and in compliance with state and local regulations, and good engineering practice.*

Registered CE, PE, Geologist, REHS: \_\_\_\_\_

Address: 5741 Palmen Way, Ste. D Phone: 760-438-3155 Date: 5-6-19  
Carlsbad, Co. 92010

FOR DEPARTMENT USE ONLY

Approved: Yes \_\_\_\_\_ No \_\_\_\_\_ Date: \_\_\_\_\_ Final Map Required: Yes \_\_\_\_\_ No \_\_\_\_\_  
Specialist: \_\_\_\_\_ Date: \_\_\_\_\_  
Building Plan Review: \_\_\_\_\_ Date: \_\_\_\_\_  
Grading Inspection: \_\_\_\_\_ Date: \_\_\_\_\_  
Water Sample Analysis Results: \_\_\_\_\_ Date: \_\_\_\_\_



**COUNTY OF SAN DIEGO**  
**DEPARTMENT OF ENVIRONMENTAL HEALTH**  
**PERCOLATION TEST REPORT**

DEH Control #: \_\_\_\_\_  
Date: \_\_\_\_\_  
Activity Code: \_\_\_\_\_

Assessor's Parcel Number: 1241503500 Map # \_\_\_\_\_ Lot # 392  
Site Address 5820 W. Lilac Road Town: Bonsall Zip Code: 92003  
Owner: Ocean Breeze Farms, LLC Phone: \_\_\_\_\_  
Mailing Address: 5820 W. Lilac Road, Bonsall

Test Hole #	Test Depth	Stabilized Rate	Test Hole #	Test Depth	Stabilized Rate	Average Perc Rate
P1	48.00"	216	P5	51.50"	4.76	50.45
P2	60.50"	57.50"	P6	62.75"	15.53	
P3	61.00"	4.33				
P4	60.50"	4.59				

*Vertical seepage pits: Provide soils log, uniformity/capacity test results, and calculations on separate 8-1/2" x 11" sheets of paper*

TYPE OF SOIL: (clay, silt, sand, decomposed granite, etc.)

Surface: Clayey Sand, Light Brown, Dry, Loose (SC)  
3.5 ft. below surface: Clayey Sand, Brown, Damp, Med. Dense (SC)  
\_\_\_\_\_ ft. below surface: \_\_\_\_\_  
\_\_\_\_\_ ft. below surface: \_\_\_\_\_  
\_\_\_\_\_ ft. below surface: \_\_\_\_\_

Depth to Refusal: No Refusal Depth to Groundwater: None encountered

**RECOMMENDATIONS:**

Septic Tank: 1506 gal Pump Chamber: \_\_\_\_\_ gal Surge Tank: \_\_\_\_\_ gal  
Leach Line Length: 675 ft Seepage Pit Type: \_\_\_\_\_ Number of Pits: \_\_\_\_\_  
Trench Depth: 4 ft Length: \_\_\_\_\_ ft Width: \_\_\_\_\_ ft  
Rock below Pipe: 12 in Total Depth: \_\_\_\_\_ ft Cap Depth: \_\_\_\_\_ ft  
Other: \_\_\_\_\_

Proposed Structure: SINGLE FAMILY RESIDENTIAL 5-6 BEDROOMS

**WATER SUPPLY:**

Source of Potable Water: \_\_\_\_\_ Well Permit Number: \_\_\_\_\_

*I have reviewed this percolation data and design of the subsurface sewage disposal system for this parcel and find the data and design to be accurate and in compliance with state and local regulations, and good engineering practice.*

Registered CE, PE, Geologist, REHS: \_\_\_\_\_

Address: 5741 Palmen Way, Ste. D Phone: 760-438-3155 Date: 5-6-19  
CARLSBAD, CA.

**FOR DEPARTMENT USE ONLY**

Approved: Yes \_\_\_\_\_ No \_\_\_\_\_ Date: \_\_\_\_\_ Final Map Required: Yes \_\_\_\_\_ No \_\_\_\_\_  
Specialist: \_\_\_\_\_ Date: \_\_\_\_\_  
Building Plan Review: \_\_\_\_\_ Date: \_\_\_\_\_  
Grading Inspection: \_\_\_\_\_ Date: \_\_\_\_\_  
Water Sample Analysis Results: \_\_\_\_\_ Date: \_\_\_\_\_



**COUNTY OF SAN DIEGO**  
**DEPARTMENT OF ENVIRONMENTAL HEALTH**  
**PERCOLATION TEST REPORT**

DEH Control #: \_\_\_\_\_  
Date: \_\_\_\_\_  
Activity Code: \_\_\_\_\_

Assessor's Parcel Number: 1241503500 Map # \_\_\_\_\_ Lot # 393  
Site Address 5820 W. Lilac Road Town: Bonsall Zip Code: 92003  
Owner: Ocean Breeze Farms, LLC Phone: \_\_\_\_\_  
Mailing Address: 5820 W. Lilac Road, Bonsall

Test Hole #	Test Depth	Stabilized Rate	Test Hole #	Test Depth	Stabilized Rate	Average Perc Rate
P1	49.00"	18.42	P5	52.00	26.09	48.45
P2	60.00"	74.00	P6	66.00	31.67	
P3	62.00"	66.40				
P4	60.00"	74.10				

*Vertical seepage pits: Provide soils log, uniformity/capacity test results, and calculations on separate 8-1/2" x 11" sheets of paper*

TYPE OF SOIL: (clay, silt, sand, decomposed granite, etc.)

Surface: Clayey Sand, Reddish Brown, Dry, loose (SC)  
3 ft. below surface: Silty Sand, Brown, wet, loose - med. Dense (SM)  
\_\_\_\_ ft. below surface: \_\_\_\_\_  
\_\_\_\_ ft. below surface: \_\_\_\_\_  
\_\_\_\_ ft. below surface: \_\_\_\_\_

Depth to Refusal: NO Refusal Depth to Groundwater: None encountered

**RECOMMENDATIONS:**

Septic Tank: 1500 gal Pump Chamber: \_\_\_\_\_ gal Surge Tank: \_\_\_\_\_ gal  
Leach Line Length: 675 ft Seepage Pit Type: \_\_\_\_\_ Number of Pits: \_\_\_\_\_  
Trench Depth: 4 ft Length: \_\_\_\_\_ ft Width: \_\_\_\_\_ ft  
Rock below Pipe: 12 in Total Depth: \_\_\_\_\_ ft Cap Depth: \_\_\_\_\_ ft  
Other: \_\_\_\_\_

Proposed Structure: SINGLE FAMILY RESIDENTIAL 5-6 bdr

**WATER SUPPLY:**

Source of Potable Water: \_\_\_\_\_ Well Permit Number: \_\_\_\_\_

*I have reviewed this percolation data and design of the subsurface sewage disposal system for this parcel and find the data and design to be accurate and in compliance with state and local regulations, and good engineering practice.*

Registered CE, PE, Geologist, REHS: \_\_\_\_\_

Address: 5741 Palmer Way, Ste. 12 Phone: 760-438-3155 Date: 5-6-19  
CARLSBAD, CA. 92010

FOR DEPARTMENT USE ONLY

Approved: Yes \_\_\_\_ No \_\_\_\_ Date: \_\_\_\_\_ Final Map Required: Yes \_\_\_\_ No \_\_\_\_  
Specialist: \_\_\_\_\_ Date: \_\_\_\_\_  
Building Plan Review: \_\_\_\_\_ Date: \_\_\_\_\_  
Grading Inspection: \_\_\_\_\_ Date: \_\_\_\_\_  
Water Sample Analysis Results: \_\_\_\_\_ Date: \_\_\_\_\_



**COUNTY OF SAN DIEGO**  
**DEPARTMENT OF ENVIRONMENTAL HEALTH**  
**PERCOLATION TEST REPORT**

DEH Control #: \_\_\_\_\_  
Date: \_\_\_\_\_  
Activity Code: \_\_\_\_\_

Assessor's Parcel Number: 1241503500 Map # \_\_\_\_\_ Lot # 394  
Site Address 5820 W. Lilac Road Town: Bonsall Zip Code: 92003  
Owner: Ocean Breeze Farms, LLC Phone: \_\_\_\_\_  
Mailing Address: 5820 W. Lilac Road, Bonsall

Test Hole #	Test Depth	Stabilized Rate	Test Hole #	Test Depth	Stabilized Rate	Average Perc Rate
P1	56.50"	146	P5	67.50"	159	149.17
P2	57.00"	144	P6	62.75"	142	
P3	60.50"	148				
P4	63.75"	156				

*Vertical seepage pits: Provide soils log, uniformity/capacity test results, and calculations on separate 8-1/2" x 11" sheets of paper*

**TYPE OF SOIL:** (clay, silt, sand, decomposed granite, etc.)

Surface: Clayey Sand, Light Brown, Dry, loose (SC)  
4 ft. below surface: Clayey Sand, Dark Brown, Damp, loose-med. Dense (SC)  
\_\_\_\_\_ ft. below surface: \_\_\_\_\_  
\_\_\_\_\_ ft. below surface: \_\_\_\_\_  
\_\_\_\_\_ ft. below surface: \_\_\_\_\_

Depth to Refusal: No Refusal Depth to Groundwater: None encountered

**RECOMMENDATIONS:**

Septic Tank: 1500 gal Pump Chamber: \_\_\_\_\_ gal Surge Tank: \_\_\_\_\_ gal  
Leach Line Length: — ft Seepage Pit Type: \_\_\_\_\_ Number of Pits: \_\_\_\_\_  
Trench Depth: 4 ft Length: \_\_\_\_\_ ft Width: \_\_\_\_\_ ft  
Rock below Pipe: 12 in Total Depth: \_\_\_\_\_ ft Cap Depth: \_\_\_\_\_ ft  
Other: RATE EXCEEDS DEH minimum, Recommend additional TEST/76.  
Proposed Structure: SINGLE FAMILY RESIDENTIAL 5-6 bdrm

**WATER SUPPLY:**

Source of Potable Water: \_\_\_\_\_ Well Permit Number: \_\_\_\_\_

*I have reviewed this percolation data and design of the subsurface sewage disposal system for this parcel and find the data and design to be accurate and in compliance with state and local regulations, and good engineering practice.*

Registered CE, PE, Geologist, REHS: \_\_\_\_\_

Address: 5741 Palmen Way, Ste. D Phone: 760-438-3155 Date: 5-6-19  
CARLSBAD, CA. 92010

FOR DEPARTMENT USE ONLY

Approved: Yes \_\_\_\_\_ No \_\_\_\_\_ Date: \_\_\_\_\_ Final Map Required: Yes \_\_\_\_\_ No \_\_\_\_\_  
Specialist: \_\_\_\_\_ Date: \_\_\_\_\_  
Building Plan Review: \_\_\_\_\_ Date: \_\_\_\_\_  
Grading Inspection: \_\_\_\_\_ Date: \_\_\_\_\_  
Water Sample Analysis Results: \_\_\_\_\_ Date: \_\_\_\_\_



**COUNTY OF SAN DIEGO**  
**DEPARTMENT OF ENVIRONMENTAL HEALTH**  
**PERCOLATION TEST REPORT**

DEH Control #: \_\_\_\_\_  
Date: \_\_\_\_\_  
Activity Code: \_\_\_\_\_

Assessor's Parcel Number: 1241503560 Map # \_\_\_\_\_ Lot # 395  
Site Address 5820 W. Lilac Road Town: Bonsall Zip Code: 92003  
Owner: Ocean Breeze Farms, LLC Phone: \_\_\_\_\_  
Mailing Address: 5820 W. Lilac Road, Bonsall

Test Hole #	Test Depth	Stabilized Rate	Test Hole #	Test Depth	Stabilized Rate	Average Perc Rate
P1	62.00"	0	P5	70.5"	0	290
P2	60.50"	396	P6	64.50"	82	
P3	62.25"	334				
P4	61.25"	348				

*Vertical seepage pits: Provide soils log, uniformity/capacity test results, and calculations on separate 8-1/2" x 11" sheets of paper*

**TYPE OF SOIL:** (clay, silt, sand, decomposed granite, etc.)

Surface: STIFF Sand, Light Brown, Dry, loose, trace roots (SM)  
3 ft. below surface: Clayey Sand, Dark Brown, Damp, STIFF (SC)  
\_\_\_\_ ft. below surface: \_\_\_\_\_  
\_\_\_\_ ft. below surface: \_\_\_\_\_  
\_\_\_\_ ft. below surface: \_\_\_\_\_

Depth to Refusal: No Refusal Depth to Groundwater: None encountered

**RECOMMENDATIONS:**

Septic Tank: 1500 gal Pump Chamber: \_\_\_\_\_ gal Surge Tank: \_\_\_\_\_ gal  
Leach Line Length: \_\_\_\_\_ ft Seepage Pit Type: \_\_\_\_\_ Number of Pits: \_\_\_\_\_  
Trench Depth: 4 ft Length: \_\_\_\_\_ ft Width: \_\_\_\_\_ ft  
Rock below Pipe: 12 in Total Depth: \_\_\_\_\_ ft Cap Depth: \_\_\_\_\_ ft

Other: RATE EXCEEDS DEH MINIMUM, RECOMMEND ADDITIONAL TESTING.

Proposed Structure: SINGLE FAMILY RESIDENTIAL 5-6 BDRM

**WATER SUPPLY:**

Source of Potable Water: \_\_\_\_\_ Well Permit Number: \_\_\_\_\_

*I have reviewed this percolation data and design of the subsurface sewage disposal system for this parcel and find the data and design to be accurate and in compliance with state and local regulations, and good engineering practice.*

Registered CE, PE, Geologist, REHS: \_\_\_\_\_

Address: 5741 Palmen Way, Ste. D Phone: 760-438-3155 Date: 5-6-19  
CARLSBAD, CA. 92010

FOR DEPARTMENT USE ONLY

Approved: Yes \_\_\_\_ No \_\_\_\_ Date: \_\_\_\_\_ Final Map Required: Yes \_\_\_\_ No \_\_\_\_  
Specialist: \_\_\_\_\_ Date: \_\_\_\_\_  
Building Plan Review: \_\_\_\_\_ Date: \_\_\_\_\_  
Grading Inspection: \_\_\_\_\_ Date: \_\_\_\_\_  
Water Sample Analysis Results: \_\_\_\_\_ Date: \_\_\_\_\_



**COUNTY OF SAN DIEGO**  
**DEPARTMENT OF ENVIRONMENTAL HEALTH**  
**PERCOLATION TEST REPORT**

DEH Control #: \_\_\_\_\_  
Date: \_\_\_\_\_  
Activity Code: \_\_\_\_\_

Assessor's Parcel Number: 1272710200 Map # \_\_\_\_\_ Lot # 396  
Site Address 5820 W Lital Road Town: Bonsall Zip Code: 92003  
Owner: Ocean Breeze Ranch Phone: \_\_\_\_\_  
Mailing Address: \_\_\_\_\_

Test Hole #	Test Depth	Stabilized Rate	Test Hole #	Test Depth	Stabilized Rate	Average Perc Rate
P1	64.00"	4.31	P5	59.50"	62.67	20.69
P2	55.00"	4.82	P6	62.00"	44	
P3	55.50"	4.36				
P4	66.00"	4.00				

*Vertical seepage pits: Provide soils log, uniformity/capacity test results, and calculations on separate 8-1/2" x 11" sheets of paper*

**TYPE OF SOIL:** (clay, silt, sand, decomposed granite, etc.)

Surface: Clayey Sand, Reddish Brown, Dry, loose (SC)  
2.6 ft. below surface: Clayey Sand, Brown, Damp, Med. Dense (SC)  
3.5 ft. below surface: Clayey Sand/Silty Sand, Olive Brown, Damp, Med. Dense to Dense (SC/SM)  
\_\_\_\_\_ ft. below surface: \_\_\_\_\_  
\_\_\_\_\_ ft. below surface: \_\_\_\_\_  
Depth to Refusal: No Refusal Depth to Groundwater: None encountered

**RECOMMENDATIONS:**

Septic Tank: 1500 gal Pump Chamber: \_\_\_\_\_ gal Surge Tank: \_\_\_\_\_ gal  
Leach Line Length: 530 ft Seepage Pit Type: \_\_\_\_\_ Number of Pits: \_\_\_\_\_  
Trench Depth: 4 ft Length: \_\_\_\_\_ ft Width: \_\_\_\_\_ ft  
Rock below Pipe: 12 in Total Depth: \_\_\_\_\_ ft Cap Depth: \_\_\_\_\_ ft  
Other: \_\_\_\_\_  
Proposed Structure: SINGLE FAMILY RESIDENTIAL, 5-6 Bdrm.

**WATER SUPPLY:**

Source of Potable Water: \_\_\_\_\_ Well Permit Number: \_\_\_\_\_

*I have reviewed this percolation data and design of the subsurface sewage disposal system for this parcel and find the data and design to be accurate and in compliance with state and local regulations, and good engineering practice.*

Registered CE, PE, Geologist, REHS: \_\_\_\_\_

Address: 5741 Palmer Way, Ste. D Phone: 760-438-3155 Date: 5-6-19  
CARLSBAD, CA. 92010

**FOR DEPARTMENT USE ONLY**

Approved: Yes \_\_\_\_\_ No \_\_\_\_\_ Date: \_\_\_\_\_ Final Map Required: Yes \_\_\_\_\_ No \_\_\_\_\_  
Specialist: \_\_\_\_\_  
Building Plan Review: \_\_\_\_\_ Date: \_\_\_\_\_  
Grading Inspection: \_\_\_\_\_ Date: \_\_\_\_\_  
Water Sample Analysis Results: \_\_\_\_\_ Date: \_\_\_\_\_



**COUNTY OF SAN DIEGO**  
**DEPARTMENT OF ENVIRONMENTAL HEALTH**  
**PERCOLATION TEST REPORT**

DEH Control #: \_\_\_\_\_  
Date: \_\_\_\_\_  
Activity Code: \_\_\_\_\_

Assessor's Parcel Number: 1241503500 Map # \_\_\_\_\_ Lot # R7  
Site Address 5820 W. Lilac Road Town: Bonsall Zip Code: 92003  
Owner: Ocean Breeze Farms, LLC Phone: \_\_\_\_\_  
Mailing Address: 5820 W. Lilac Road, Bonsall

Test Hole #	Test Depth	Stabilized Rate	Test Hole #	Test Depth	Stabilized Rate	Average Perc Rate
P1	52.00"	88	P5	64.25"	136	118.06
P2	47.50"	88	P6	56.00"	251	
P3	60.50"	57.33				
P4	56.00	88				

*Vertical seepage pits: Provide soils log, uniformity/capacity test results, and calculations on separate 8-1/2" x 11" sheets of paper*

**TYPE OF SOIL:** (clay, silt, sand, decomposed granite, etc.)

Surface: Clayey Sand, Brown, Dry, Loose (SC)  
2.5 ft. below surface: Silty Sand, Yellowish Brown, Damp, Med. Dense - Dense (SM)  
4 ft. below surface: Silty Sand, olive Brown, Damp, dense (SM)  
\_\_\_\_ ft. below surface: \_\_\_\_\_  
\_\_\_\_ ft. below surface: \_\_\_\_\_  
Depth to Refusal: No Refusal Depth to Groundwater: None encountered

**RECOMMENDATIONS:**

Septic Tank: 1000 gal Pump Chamber: \_\_\_\_\_ gal Surge Tank: \_\_\_\_\_ gal  
Leach Line Length: 1425 ft Seepage Pit Type: \_\_\_\_\_ Number of Pits: \_\_\_\_\_  
Trench Depth: 4 ft Length: \_\_\_\_\_ ft Width: \_\_\_\_\_ ft  
Rock below Pipe: 12 in Total Depth: \_\_\_\_\_ ft Cap Depth: \_\_\_\_\_ ft  
Other: \_\_\_\_\_  
Proposed Structure: Single Family Residential 2-3 Bdrms

**WATER SUPPLY:**

Source of Potable Water: \_\_\_\_\_ Well Permit Number: \_\_\_\_\_

*I have reviewed this percolation data and design of the subsurface sewage disposal system for this parcel and find the data and design to be accurate and in compliance with state and local regulations, and good engineering practice.*

Registered CE, PE, Geologist, REHS: \_\_\_\_\_

Address: 5741 Palmen Way, Ste D Phone: 760-438-3155 Date: 5-6-19  
CARLSBAD, CA. 92010

FOR DEPARTMENT USE ONLY

Approved: Yes \_\_\_\_ No \_\_\_\_ Date: \_\_\_\_\_ Final Map Required: Yes \_\_\_\_ No \_\_\_\_  
Specialist: \_\_\_\_\_ Date: \_\_\_\_\_  
Building Plan Review: \_\_\_\_\_ Date: \_\_\_\_\_  
Grading Inspection: \_\_\_\_\_ Date: \_\_\_\_\_  
Water Sample Analysis Results: \_\_\_\_\_ Date: \_\_\_\_\_



**COUNTY OF SAN DIEGO**  
**DEPARTMENT OF ENVIRONMENTAL HEALTH**  
**PERCOLATION TEST REPORT**

DEH Control #: \_\_\_\_\_  
Date: \_\_\_\_\_  
Activity Code: \_\_\_\_\_

Assessor's Parcel Number: 1241503500 Map # \_\_\_\_\_ Lot # R8  
Site Address 5820 W. Liliac Road Town: Bonsall Zip Code: 92003  
Owner: Ocean Breeze Farms, LLC Phone: \_\_\_\_\_  
Mailing Address: 5820 W. Liliac Road, Bonsall

Test Hole #	Test Depth	Stabilized Rate	Test Hole #	Test Depth	Stabilized Rate	Average Perc Rate
P1	61.00"	83.34	P5	62.00"	152	141.22
P2	60.00"	152	P6	61.00"	156	
P3	61.50"	152				
P4	61.50"	152				

*Vertical seepage pits: Provide soils log, uniformity/capacity test results, and calculations on separate 8-1/2" x 11" sheets of paper*

TYPE OF SOIL: (clay, silt, sand, decomposed granite, etc.)

Surface: Clayey Sand / Sandy clay, Light Brown, Dry, loose (SC/CL)  
1.5 ft. below surface: Sandy clay, Brown, damp, loose - med. Dense (CL)  
3.5 ft. below surface: Sandy clay, Dark Brown, moist, med. Dense (CL)  
\_\_\_\_\_ ft. below surface: \_\_\_\_\_  
\_\_\_\_\_ ft. below surface: \_\_\_\_\_

Depth to Refusal: No Refusal Depth to Groundwater: None encountered

**RECOMMENDATIONS:**

Septic Tank: 1000 gal Pump Chamber: \_\_\_\_\_ gal Surge Tank: \_\_\_\_\_ gal  
Leach Line Length: \_\_\_\_\_ ft Seepage Pit Type: \_\_\_\_\_ Number of Pits: \_\_\_\_\_  
Trench Depth: 4 ft Length: \_\_\_\_\_ ft Width: \_\_\_\_\_ ft  
Rock below Pipe: 12 in Total Depth: \_\_\_\_\_ ft Cap Depth: \_\_\_\_\_ ft  
Other: RATE EXCEEDS DEH MINIMUM, RECOMMEND ADDITIONAL TESTING.  
Proposed Structure: SINGLE FAMILY RESIDENTIAL 2-3 bdrm.

**WATER SUPPLY:**

Source of Potable Water: \_\_\_\_\_ Well Permit Number: \_\_\_\_\_

*I have reviewed this percolation data and design of the subsurface sewage disposal system for this parcel and find the data and design to be accurate and in compliance with state and local regulations, and good engineering practice.*

Registered CE, PE, Geologist, REHS: \_\_\_\_\_

Address: 5741 PALMER WAY STE. D Phone: 760-438-3155 Date: 5-6-19  
CARLSBAD, CA. 92010

FOR DEPARTMENT USE ONLY

Approved: Yes \_\_\_\_ No \_\_\_\_ Date: \_\_\_\_\_ Final Map Required: Yes \_\_\_\_ No \_\_\_\_  
Specialist: \_\_\_\_\_ Date: \_\_\_\_\_  
Building Plan Review: \_\_\_\_\_ Date: \_\_\_\_\_  
Grading Inspection: \_\_\_\_\_ Date: \_\_\_\_\_  
Water Sample Analysis Results: \_\_\_\_\_ Date: \_\_\_\_\_





**COUNTY OF SAN DIEGO**  
**DEPARTMENT OF ENVIRONMENTAL HEALTH**  
**PERCOLATION TEST REPORT**

DEH Control #: \_\_\_\_\_  
Date: \_\_\_\_\_  
Activity Code: \_\_\_\_\_

Assessor's Parcel Number: 1241503500 Map # \_\_\_\_\_ Lot # B-9  
Site Address 5820 W. Lilac Road Town: Bonsall Zip Code: 92003  
Owner: Ocean Breeze Farms, LLC Phone: \_\_\_\_\_  
Mailing Address: 5820 W. Lilac Road, Bonsall

Test Hole #	Test Depth	Stabilized Rate	Test Hole #	Test Depth	Stabilized Rate	Average Perc Rate
P1	65.00"	0.86				1.38
P2	57.00"	2.40				
P3	57.00"	0.56				
P4	63.50"	1.77				

*Vertical seepage pits: Provide soils log, uniformity/capacity test results, and calculations on separate 8-1/2" x 11" sheets of paper*

TYPE OF SOIL: (clay, silt, sand, decomposed granite, etc.)

Surface: Sand w/ gravel, Light Brown, Dry, loose (SP)  
0.5 ft. below surface: Fine-med. Sand, med. Brown, Damp, loose (SW)  
2.5 ft. below surface: Fine-med. Sand, greenish light Brown, Damp, loose (SW)  
\_\_\_\_ ft. below surface: \_\_\_\_\_  
\_\_\_\_ ft. below surface: \_\_\_\_\_  
Depth to Refusal: No Refusal Depth to Groundwater: None encountered

**RECOMMENDATIONS:**

Septic Tank: 1000 gal Pump Chamber: \_\_\_\_\_ gal Surge Tank: \_\_\_\_\_ gal  
Leach Line Length: 300 ft Seepage Pit Type: \_\_\_\_\_ Number of Pits: \_\_\_\_\_  
Trench Depth: 4 ft Length: \_\_\_\_\_ ft Width: \_\_\_\_\_ ft  
Rock below Pipe: 12 in Total Depth: \_\_\_\_\_ ft Cap Depth: \_\_\_\_\_ ft  
Other: \_\_\_\_\_  
Proposed Structure: BARN/SHOP 1 Bath and a sink

**WATER SUPPLY:**

Source of Potable Water: \_\_\_\_\_ Well Permit Number: \_\_\_\_\_

*I have reviewed this percolation data and design of the subsurface sewage disposal system for this parcel and find the data and design to be accurate and in compliance with state and local regulations, and good engineering practice.*

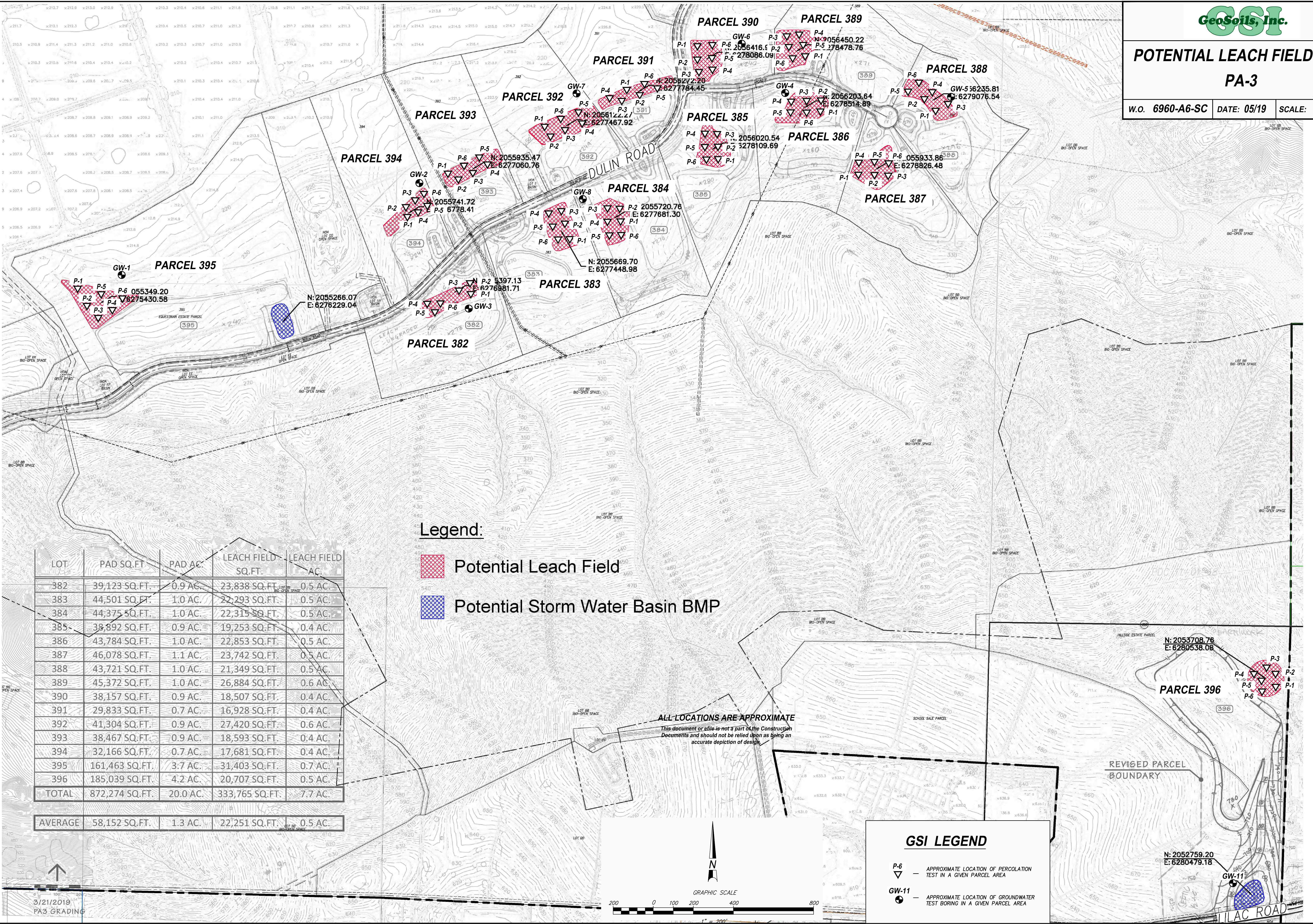
Registered CE, PE, Geologist, REHS: \_\_\_\_\_

Address: 5741 Palmen Way, Ste 101 Phone: 760-438-3155 Date: 5-6-19  
CARLSBAD, Ca. 92010

FOR DEPARTMENT USE ONLY

Approved: Yes \_\_\_\_ No \_\_\_\_ Date: \_\_\_\_\_ Final Map Required: Yes \_\_\_\_ No \_\_\_\_  
Specialist: \_\_\_\_\_ Date: \_\_\_\_\_  
Building Plan Review: \_\_\_\_\_ Date: \_\_\_\_\_  
Grading Inspection: \_\_\_\_\_ Date: \_\_\_\_\_  
Water Sample Analysis Results: \_\_\_\_\_ Date: \_\_\_\_\_





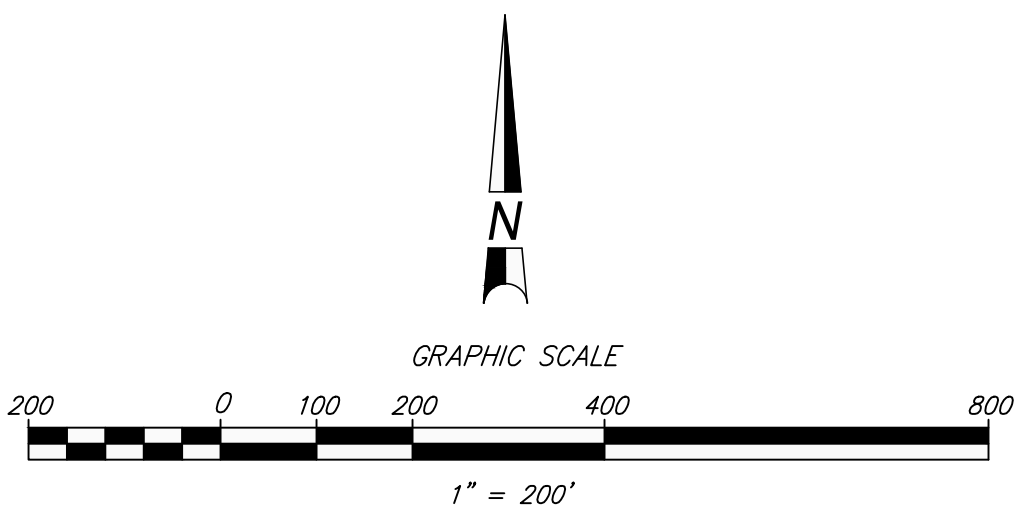
GSI LEGEND

- P-6 — APPROXIMATE LOCATION OF PERCOLATION TEST IN A GIVEN PARCEL AREA
- GW-11 — APPROXIMATE LOCATION OF GROUNDWATER TEST BORING IN A GIVEN PARCEL AREA





SEE SHEET 3



ALL LOCATIONS ARE APPROXIMATE  
This document or effie is not a part of the Construction Documents and should not be relied upon as being an accurate depiction of design.

### GSI LEGEND

- P-6 — APPROXIMATE LOCATION OF PERCOLATION TEST IN A GIVEN PARCEL AREA
- GW-11 — APPROXIMATE LOCATION OF GROUNDWATER TEST BORING IN A GIVEN PARCEL AREA
- R7 — APPROXIMATE LOCATION OF MOBILE HOME RESIDENTIAL, POTENTIAL LEACH FIELD AREA
- R8 — APPROXIMATE LOCATION OF MOBILE HOME RESIDENTIAL, POTENTIAL LEACH FIELD AREA
- B9 — APPROXIMATE LOCATION OF BARN/ SHOP LEACH FIELD AREA

### BUILDING LEGEND:

- |    |                          |     |                        |
|----|--------------------------|-----|------------------------|
| A  | ARENA OR EXERCISER       | FWR | FOWLING PENS WITH ROOF |
| B1 | SHOP/ EQUIPMENT STORAGE  | LF  | LEACH FIELD            |
| B2 | MARE BARN                | M   | MOBILE HOME            |
| B3 | LAY UP BARN REHAB        | P   | THERAPY POOL           |
| B4 | TRAINING BARN            | PH  | PUMP HOUSE             |
| B5 | TRAINING BARN            | PNR | PENS NO ROOF           |
| B6 | STALLION BARN            | PS  | PASTURE SHED           |
| B7 | FOWLING BARN             | PWR | PENS WITH ROOF         |
| B8 | BREEDING BARN            | O   | QUARANTINE PEN         |
| B9 | SHOP                     | R   | RESIDENCE BUILDING     |
| EH | RELOCATED EMPLOYEE HOUSE | ST  | SEPTIC TANK            |

### BUILDING STATUS LEGEND:

- |      |          |   |
|------|----------|---|
| (AB) | AS-BUILT | RECENTLY BUILT WITHOUT PRIOR PERMIT                       |
| (E)  | EXISTING | EXISTING BUILDINGS/STRUCTURES WITH PERMIT                 |
| (P)  | PROPOSED | PROPOSED NEW BUILDINGS/STRUCTURES REQUIRE BUILDING PERMIT |

### LEGEND:

- |   |                       |    |                               |
|---|-----------------------|----|-------------------------------|
| 1 | POWER POLE (EXIST.)   | 7  | ELECTRIC TRANSFORMER (EXIST.) |
| 2 | DIRT ROAD (EXIST.)    | 8  | DIRT ROAD (PROPOSED)          |
| 3 | ASPHALT ROAD (EXIST.) | 9  | ASPHALT ROAD (PROPOSED)       |
| 4 | LIGHT (EXIST.)        | 10 | TANK (EXIST.)                 |
| 5 | WOOD FENCE (EXIST.)   | 11 | WATER LINE (EXIST.)           |
| 6 | WOOD FENCE (PROPOSED) |    |                               |

### BASE MAP FROM:

MAJOR USE PERMIT 5615 EQUESTRIAN CENTER	
OCEAN BREEZE RANCH	
	PROJECT DESIGN CONSULTANTS Planning   Landscape Architecture   Engineering   Survey
SHEET 2 OF 8	



## POTENTIAL LEACH FIELD MAP

### BUILDING SITES R7, R8, B9

Plate 2

W.O. 6960-A6-SC	DATE: 05/19	SCALE: 1" = 200'
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